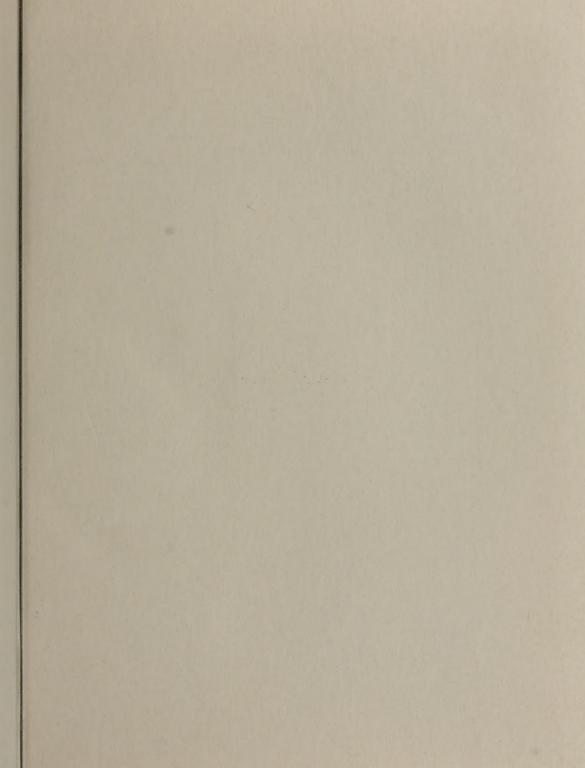
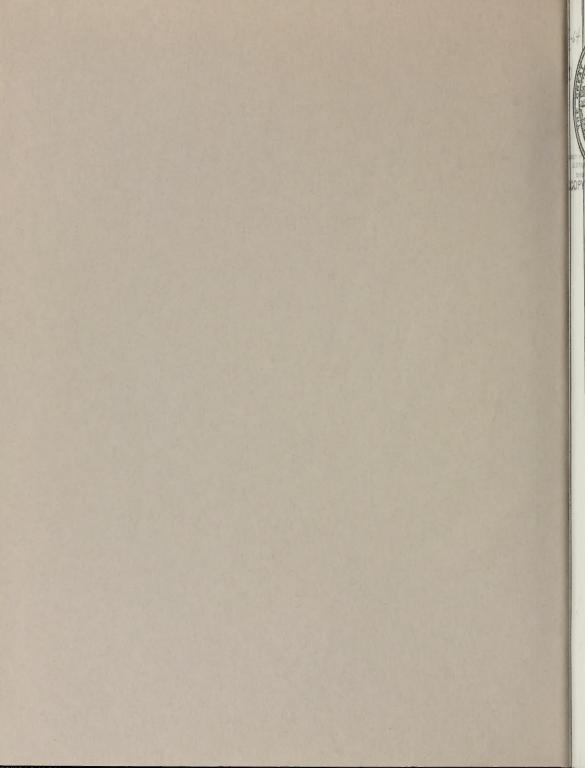
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State of California THE RESOURCES AGENCY

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BULLETIN No. 130-64

HYDROLOGIC DATA: 1964

Volume V: SOUTHERN CALIFORNIA

Appendix D: SURFACE WATER QUALITY



APRIL 1966

HUGO FISHER

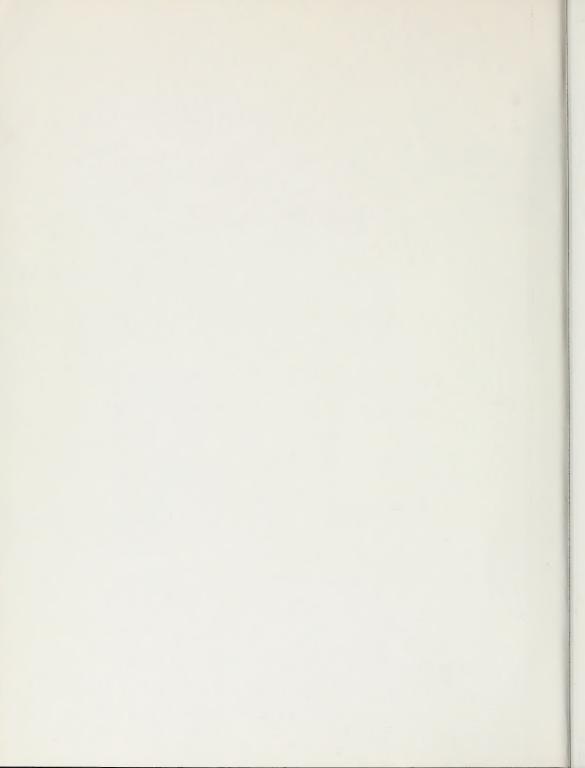
Administrator
The Resources Agency

EDMUND G. BROWN
Governor
State of California

WILLIAM E. WARNE

Director

Department of Water Resources



State of California THE RESOURCES AGENCY

Department of Water Resources

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APRIL 1966

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Volume IV - SAN JOAQUIN VALLEY

Volume V - SOUTHERN CALIFORNIA

Each volume consists of the following:

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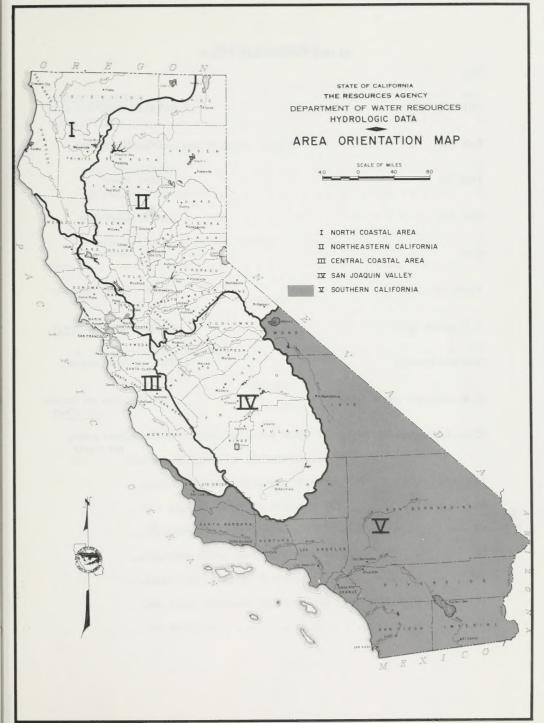
Appendix A - CLIMATE

Appendix B - SURFACE WATER FLOW

Appendix C - GROUND WATER MEASUREMENTS

Appendix D - SURFACE WATER QUALITY

Appendix E - GROUND WATER QUALITY



METRIC CONVERSION TABLE

ENGLISH UNIT	EQUIVALE	ENT METRIC UNIT
Inch (in)	2.54	Centimeters
Foot (ft)	0.3048	Meter
Mile (mi)	1.609	Kilometers
Acre	0.405	Hectare
Square mile (sq. mi.)	2.590	Square kilometer
U. S. gallon (gal)	3.785	Liters
Acre foot (acre-ft)	1,233.5	Cubic meters
U. S. gallon per minute (gpm)	0.0631	Liters per second
Cubic feet per second (cfs)	1.7	Cubic meters per minute

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PLATE

(Bound at the back of this appendix)

Plate No.

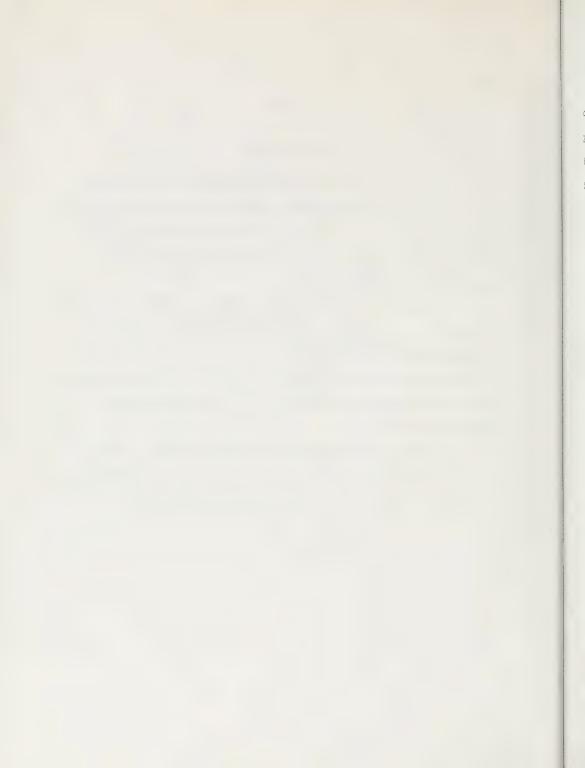
Location of Surface Water Quality Monitoring Program Stations, 1963-64

ACKNOWLEDGMENTS

The extensive coverage of the surface water quality monitoring program in Southern California has been made possible through the cooperation of federal, state, and local agencies. The Department wishes to express its appreciation for the valuable assistance and cooperation received from the agencies listed below.

Laboratory analytical results for certain surface water stations were supplied to the Department by The Metropolitan Water District of Southern California, City of Los Angeles Department of Water and Power, City of Los Angeles Health Department, Los Angeles County Health Department, City of Long Beach Health Department, and Fruit Growers Laboratory of Santa Paula, California.

Imperial County Health Department rendered valuable aid in making bacteriological analyses for surface water samples collected in that county.



INTRODUCTION

Appendix D to Volume V of Bulletin No. 130-64 contains data on quality of surface water in Southern California for the 1963-64 water year. The data presented are measured values of the chemical, physical, bacteriological, and radiological characteristics of surface water in Southern California. The Southern California area is shown on Figure 1.

Surveillance Program Changes, 1963-64

During the water year reported, 52 stations were included in the surface water quality surveillance program in Southern California. These stations are listed in Table D-1. Since the last reporting date, two stations were removed and three new ones added.

Warm Creek at San Bernardino (Station 50C), a Santa Ana River tributary, was removed from the program because it had been dry since February 1962. However, two other stations in the upper Santa Ana River Basin were added to the program -- Santa Ana River at Colton (Station 51f) and San Timoteo Creek near Loma Linda (Station 51g). The surface flow measuring stations at these points were established as a part of a cooperative program conducted by the Department and the United States Geological Survey (USGS).

Except for occasional storm runoff at Station 51f, flow consists primarily of waste water effluent from two sewage treatment plants, both of the City of San Bernardino. Station 51g is located at a USGS gaging station on San Timoteo Creek, tributary to Santa Ana River. The flow at this station is waste water effluent from the City of Loma Linda sewage treatment plant.

Forester Creek at Mission Gorge Road (Station 65a) was removed from the program in July 1963, and San Diego River at Mission Gorge Road (Station 65c) was added as a replacement. At one time, Station 65a monitored waste water flow consisting mainly of effluent from the City of El Cajon sewage treatment plant. A pipeline was constructed, however, which discharged this effluent to a location further downstream, bypassing the station. Station 65c was selected to monitor the stream below this new point of discharge. (The pipeline has since been connected to the San Diego Metropolitan Sewerage System.)

Agencies that participated in the field sampling program during the 1963-64 water year, together with the number of surface stations sampled by each, are:

Agency	Number of Stations Sampled
Department of Water Resources	46
The Metropolitan Water District of Southern California	2
City of Los Angeles Department of Water and Power	l
City of Los Angeles Health Department	·
City of Long Beach Health Department	1
City of San Bernardino	1

Field Procedures

Because of the possible effect that time and method of sampling may have on the analyses obtained, an explanation of the procedures established for surface water sample collection is given.

^{*}City of Los Angeles Health Department was abolished in July 1, 1964; its function then being assumed by the Los Angeles County Health Department.

For complete mineral and bacteriological analyses, water samples are collected monthly in the northern portion of the Southern California areas, bimonthly in most of the southern portion, and twice a year at the Colorado River stations. In addition, in May and September, samples are collected at most stations for radiological analyses and at selected stations for trace elements analyses. Samples collected for bacterio-logical examination are transported on ice to the laboratories as quickly as possible.

At the time surface samples are collected for laboratory examination, field determinations are made for dissolved oxygen by the modified Winkler method, water temperature, and field pH. A visual inspection is made of the stream or lake and the physical conditions are noted. Flow data are either obtained from gage readings or estimated by the sampler.

Laboratory Procedures

Methods of mineral, bacterial, and radiological analyses used by the Department of Water Resources are generally those described in the American Public Health Association, American Water Works Association, and Water Pollution Control Federation publication, "Standard Methods for the Examination of Water and Waste Water", 11th edition, 1960. In some cases, the methods described in the following publications also have been used:

U. S. Geological Survey, "Methods for Collection and Analysis of Water Samples", Water Supply Paper 1454, 1960.

United States Public Health Service, Taft Sanitary Engineering Center, "Taft Method Analytical Procedure, Alkyl Benzene Sulfonate Determination".

Reporting Methods

Individual chemical constituents of analyses in Table D-2 (surface water) are reported as parts per million (ppm). Bacteriological analyses, reported as most probable number per milliliter (MPN/ml), are shown in Table D-2.

In addition to the chemical constituents reported in Table D-2, oil and grease, phenols, alkalinity, 5-day biochemical oxygen demand (BOD), dissolved oxygen (DO), and free carbon dioxide (CO₂) are reported in parts per million (ppm), as are values for alkyl benzene sulfonate (ABS), which was the major constituent in household synthetic detergents (syndets) during the reporting period.

Radiological analyses for surface water are reported in picocuries per liter (pc/l). These analyses were performed by the State Department of Public Health, Sanitation and Radiation Laboratory, Berkeley, California. All surface water samples were given analyses for solid alpha-solid beta and dissolved alpha-dissolved beta activity.

Trace elements (heavy metals) analyses for surface water are reported as parts per billion in Table D-4. These analyses were performed by the United States Geological Survey Laboratory in Sacramento, California, by a newly developed spectrographic procedure perfected by that laboratory. Limitations in the precision of measurements by spectrographic analyses frequently require the reporting of results as less than or more than the amounts presented, as indicated in the footnotes accompanying the table.

It should be pointed out that the determinations of some of the reported constituents are not absolute, but merely indicative of changes in water quality. The purpose of these data is to help the investigator

judge whether further, more intensive investigation is warranted to identify a source of pollution or to trace the movement of pollution or water quality degradation.

Stream Sampling Numbering System

Stream sampling stations are indexed according to location, with the name of the stream and a brief description of the sampling point.

For ready reference, however, numbers are assigned to these stations.

Sometimes an alphabetical character is used with the number. An example of a station number is Station No. 65c, San Diego River at Mission Gorge Road.

The locations of stations sampled for the surface water quality program are indexed in Table D-1 and are shown on Plate 1.



DATA

SURFACE WATER QUALITY

TABLE D-I

SAMPLING STATION DATA AND INDEX

SURFACE WATER STATION LOCATIONS YEARS 1963-1964

Station	Station Number	Location ^a	Beginning of Record	Frequency of Sompling	Sampled by	Analysis on
	-		Record	Sampling		poge
Alamo River						
At International Boundary	59	17S/16E-18	February 1951	В	DWR	112, 171
Near Calipatria	60	11S/13E-22	March 1951	B	DWR	114, 172
All American Canal						
Near Pilot Knob	56a	166/21E-24	May 1953	S	DWR	98, 171
Chino Creek						
Near Chino	86	28/ 8W-36	April 1952	М	DWR	146, 174
Colorado River						
Near Topock, Arizona	54	7N/24E- 8	April 1951	s	DWR	92, 171
Lake Havasu, Colorado River Aqueduct at Intake	56d	3N/27E-28	November 1953	М	MWD	104, 173
Aqueduct at La Verne	69	18/ 9W- 6	April 1951	M composite	MWD	76, 168
Below Parker Dam	55	2N/27E-16	April 1951	S	DWR	94, 171
Near Blythe	56c	7S/23E- 2	May 1953	S	DWR	102, 171
At Yuma, Arizona	56	16S/23E-36	April 1951	s	DWR	96, 171, 176
Below Morelos Dam	56b	8S/24W-28d	May 1953	S	DWR	100, 171
Cuyama River						
Near Garey	448	10N/33W-25	October 1958	м	DWR	164, 165
Escondido Creek						
Near Harmony Grove	63	12S/2W-30	March 1951	В	DWR	154, 175, 177
Lake Elsinore						
At State Park	89	6S/ 5W- 1	February 1952	В	DWR	150, 174
Los Angeles Aqueduct						
Near San Fernando	70	3N/15W-30	April 1951	М	LADWP	80, 169
Los Angeles River						
At Figueroa Street	47	1S/13W-15	April 1951	M, S	LACHD-DWR	46, 166, 176
At Pacific Coast Highway	48	4s/13W-26	April 1951	M, S	LEDPH, DWR	50, 166, 176
Matilija Creek						
Above Dam	456	5N/23W-19	May 1953	м	DWR	20, 166
Mission Creek						
At Whittier Narrows	49a	2S/11W- 6	April 1951	М	DWR	58, 166
Mojave River						
At The Forks	67a	3N/ 3W-18	July 1957	*	DWR	88, 170
Near Victorville	67	6N/ 4W-29	March 1951	М	DWR	84, 170
New River						
At International Boundary	57	178/14E-14	April 1951	В	DWR	108, 171
Near Westmorland	58	12S/13E-30	February 1951	В	DWR	110, 171
Piru Creek						
Near Piru	46c	4N/18W-20	June 1957	м	DWR	32, 166
Rio Hondo		,				
At Whittier Narrows	49	2S/11W- 6	April 1951	м	DWR	54, 166, 176
Above Spreading Grounds	496	29/12W-12	May 1963	м	DWR	60, 167, 170

TABLE D-I

SAMPLING STATION DATA AND INDEX SURFACE WATER STATION LOCATIONS YEARS 1963-1964

Station	Station Number	Location a	Beginning of Record	Frequency b of Sampling	Sample d ^C	Analysis on page
Salton Sea						poge
At Salton Sea State Park	68e	7S/10E= 2	March 1955	В	DWR	118, 172
San Diego River						
At Old Mission Dam	65	15S/ 2W-25	April 1951	В	DWR	156, 175
Near Mission Gorge Road	65c	15S/ 2W-35	July 1962	В	DWR	160, 175, 177
San Dieguito River						
Below San Pasqual Valley	64	13S/ 2W- 1	April 1951	В	DWR	164, 175
San Gabriel River						
At Azusa Powerhouse	50d	1N/10W-22	March 1957	М	DWR	68, 167
At Whittier Narrows	50	2S/11W- 5	April 1951	M	DWR	64, 167, 176
San Luis Rey River						
Near Pala	62	9s/ 2₩-36	March 1951	В	DWR	164, 175
Santa Ana River						
Near Mentone	516	1S/ 2W- 4	April 1951	М	DWR	134, 174
At Colton	51 °	1s/ 4w-28	March 1964	М	DWR	142, 174
Near Arlington	51	2S/ 6W-25	January 1951	M	DWR	126, 174, 177
Near Norco	5le	2s/ 7w-36	April 1951	М	DWR	138, 174, 177
Below Prado Dam	5la	3S/ TW-29	April 1951	M	DWR	130, 174, 177
Santa Clara River						
At Los Angeles-Ventura County Line	46	4N/17W-30	April 1951	М	DWR	24, 166, 176
Near Santa Paula	46a	3N/21W-12	April 1951	М	DWR	28, 166, 176
Santa Margarita River			}			
Near Fallbrook	5le	95/ 4W-12	February 1951	В	DWR	152, 175
Santa Paula Creek						
Near Santa Paula	46e	4N/21W-27	June 1957	М	DWR	40, 166
Santa Ynez River						
At Cachuma Reservoir	440	6N/30W-19	April 1958	М	DWR	12, 165, 176
Near Solvang	45a	6N/31W-22	April 1951	М	DWR	16, 165, 176
San Timoteo Creek						
Near Loma Linda	51g	15/ 44-22	March 1964	м	DWR	144, 174
Sespe Creek						
Near Fillmore	46a	4N/20W-12	June 1957	М	DWR	36, 166
Spring Valley Creek						
Near La Pressa	650	17S/ 1W-17	March 1958	В	DWR	158, 175
Tia Juana River						
At International Boundary	66	19S/ 2W= 1	April 1951	В	DWR	162, 175
Ventura River						
Near Ventura	61	3W/23W- 8	May 1951	м	DWR	72, 167, 176
Warm Creek					City of	
At Colton	50b	1s/ 4w-21	April 1951	М	San Bdno.	122, 174, 177

SAMPLING STATION DATA AND INDEX

SURFACE WATER STATION LOCATIONS YEARS 1963-1964

Station	Station Number	Location a	Beginning of Record	Frequency of Sampling	Sompled by	Analysis on page
whitewater River						
Near Whitewater	68	3S/ 3E- 2	February 1951	В	DWR	116, 172
Near Mecca	(And	7S/ 9E-31	July 1957	В	DWR	126, 178

a. Except as indicated below, location is referenced to San Bernardino Base and Meridian.
b. M - Monthly, B - Bimonthly, Q - Quarterly, S - Semiannually.
c. DMR, Department of Water Resources; MMD, Metropolitan Water District; LACHD, Los Angeles County Health Department; LEDFH, Long Beach Department of Public Health; LADWP, Los Angeles Department of Water and Power.
d. Gila and Salt River Base and Meridian.

MINERAL ANALYSES OF SURFACE WATER FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES TABLE D-2

CENTRAL COASTAL DRAINAGE PROVINCE (T)

Analyzed	by b			DWR	DWR	DWR	DWR	DWR	DWR	DWR	DWR
oxygen	Percent			110	48	82	47	102	06	92	85
Dissolved oxygen	Parts per million			4.6	8.0	8.4	7.8	11.0	9.8	10.4	8.8
	Phenol	###									
r million	Turbidity			425	425	425	425	425	425	425	25
Constituents, in parts per million	NH4										
Comiliuent	Syndete	RIVER									
	PO4	SANTA YNEZ RIVER									
Coliforma	MPN/mi			40.45 40.45	2.00	9.0	<pre>< 0.45</pre>	<0.45 0.6	<0.45	21 23	0.0 0.0 0.4.5
200	Field pm	number		8.3 color	7.8	7.6	7.6 ucks	8.0	7.7	7.8	○
Gage ht.(ft)	Flow (cfs)	Stream name and station number	RESERVOIR	10-2-63 738.57 0700 11.43* Clear; yellowish green	737.82	737.79	1-3-64 737.41 1000 12.59* Clear; large fish and d	737.01 12.99*	736.42 13.58* golden car	736.00	734.95
Dote	Remarks	Stream name	AT CACHUMA RESERVOIR	10-2-63 0700 Clear; yell	11-14-63 1410 Clear	12-3-63 0830 Clear	1-3-64 1000 Clear; large	2-4-64 1505 Clear; large	3-3-64 1115 Clear; large	4-2-64 1110 Clear	5-4-64 1550 Clear

*Water surface below spillway in feet. Note: See page 162 for footnotes. TABLE D 2 MINERAL ANALYSES OF SUMMACE WATER CENTRAL COASTAL DRAINAGE PROVINCE (T)

"Marter murrane below colliery in feet,

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
CENTRAL COASTAL DRAINAGE PROVINCE (T)

	Total hardness CaCO ₃		328	339	335	341	333	354	357	350	
luents in	Evapl80°C hardness Evapl05°C caCO ₃			515	520	525	560	550	540	535	
consti	Sili- co SiO ₂		1	7	ω	ω	6	ω	11	6	
Mineral constituents parts per million	Boron		0.35	0.42	0.40	0.38	0.36	0.36	0 38	0 * 40	
	Fluo- ride F			0 • 5	5 • 0	9.0	9 • 0	0 • 5	9.0	0.0	
	rate NO3		1	1.0	1.5	1.0	1.5	0.5	1.0	0.0	
million	Chto- ride Cl	448	16	16 0 45	17 0.48	17 0.48	18 0.51	16 0 45	17 0.48	0.42	
parts per million equivalents per million percent reactance value	Sulfate SO ₄		î î	233	228	229	228	230	230	228 4•75 55	
ts per ivalents	Bicar - bonate HCO ₃		156	205 3•36 39	212	3.61	3.11	220 3.61 41	220 3.61 41	207	
parts equiva percen	Carbon- ate CO3	ER.	14	0	0	0	12 0 • 40	0	0	0	
ë	Potos Fum X	EZ RIVE	1	0.10	0.10	0.10	0.10	0.10	0•10 1	0.10	
constituents	Sodium	SANTA YNEZ RIVER	41	1.83	1.87	1.91	2.04	41 1.78 20	1.78 20	1.74	
Mineral co	Magne-	võ	4	3.29	3.21	5.37	3.37	3.29	3.29	3.45	
×	Calcium		1	3.49	3.49	3.44	3.29	3.79	3.84	3.54	
Specific conduct-	mhos at 25°C)		764	772	785	776	754	765	756	763	
	H	number		8 0	7.9	8 • 1	8 .3	8 0	8 • 1	7.9	
Temp	sampled in ^o F	1 1	76	65	28	56	54	53	54	80	
7 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	OAMTLE U	Stream name and station AT CACHUMA RESERVOIR	10- 2-63	11-14-63	12- 3-63	1- 3-64	5- 4-64	3- 3-64	4- 2-64	5- 4-64	

MINERAL ANALYSES OF SURFACE WATER FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES TABLE D-2

CENTRAL COASTAL DRAINAGE PROVINCE (T)

bezk	by b					
Ang			DWR	DWR	DWR	DWR
Dissolved oxygen	Percent		8	107	8	1115
Dissolved	Ports per million		8.6	4.6	9.6	10.0
	Phenol					
r million	Turbidity	fήβ	4 25	A 25		7.5.7.7.7.7.7.7.7.7.7.7.7.7.7.7.7.7.7.7
Constituents, in parts per million	NH4					
Cematitoeok	Syndeta	VER				
	PO4	SANTA YNEZ RIVER				
Coliforma	MPN/ml	เช	23	0 0 0 0	↑ 0.45 0.45	w.o.
24 44 44	E DIO	number	8.0	7.8	0.8	0.8
Gage ht.(ft)	Flow (cfs)	60	733.65	732.25 17.75* fish	730.14 19.86*	21.62*
Date	Remarks	Stream name and stat AT CACHUMA RESERVOIR	6-2-64 1020 Clear	7-1-64 732.25 1715 17.75* Clear; large fish	8-4-64 1100 Clear	9-1-64 1115 Clear

*Water surface below spillway in feet.

MINEHAL ANALYSES OF SUFFACE WATER
CENTRAL COASTAL DRAINAGE PROVINCE (T)

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
CENTRAL COASTAL DRAINAGE PROVINCE (T)

	Total hardness cs Co Co 3		359	354	357	357
fuents in	Evap1809C hardness Evap1059C CaCO3		572	570	632	8 6 6 8 4 6 9 4 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9
consti	Sili- co SiO ₂		9	10	00	•
Mineral constituents parts per million	Boron		0.41	0.36	0.38	0
	Fluo-		0 • 5	0 • 5	0.5	υ) •
	hrate NO3		1.0	2.0	2 0.03	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
million per million tance value	Chto-	448	16	17	17 0 • 48	0 2 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0	Sulfate SO ₄		232 4 • 83 55	237	242 5 0 0 4	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
ts per ivalents cent re	Bicar - bonate HCO ₃		215	3.11	188 3.08 34	3.067
por ts equivo percen	Carbon- ate CO ₃	ER	0	12 0.40	12 0 • 40	0.000
Ë	Potas- sium K	EZ RIV	4 0.10	0.10	0.10	0.10
constituents	Sodium	SANTA YNEZ RIVER	40 1•74 19	1.83	1.87	1 2 0 0 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Mineral co	Magne- sium Mg	S	3.54	3.54	3.54	2, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4,
2	Calcium		3.64	3.54	3.59	3,69
Specific conduct-	once (micro- mhos at 25°C)		772	774	779	789
	Hd	number	0 * 8	80	8 .5	φ.
Temp	when sampled in °F		65	72	74	7.3
	DATE SAMPLED	Stream name and station AT CACHUMA RESERVOIR	- 2-64	7- 1-64	79-7 -	9-1-64
	DATE	Stream AT CA	-9	7.	8	ò

		HCAL ANALYSES	
ABLE U-C	MINERAL ANALYSES OF SURFACE WATER	FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES	CENTRAL COASTAL DRAINAGE PROVINCE (T)
	MINERAL	BACTERIOLOGICAL	CENTRAL COA
		FIELD OBSERVATIONS,	

Analyzed	by b		DWR	DWR	DWR	DWR	DWR	DWR	DWR	DWR
oxygen	Percent					15.9	141	93	101	12"
Dissolved oxygen	Parts per million					13.4	14.0	16.0	10.6	55 54
	Phenol	A								
r million	Turbidity	145A				ર્રે	53	()	95	.,
Constituents, in parts per million	NHA									
Constituent	Syndete	RIVER				0.08			90.0	
	PO4	SANTA YNEZ RIVER				00.0			0.30	pa
Coliforma	MPN/mi					13 6.2	62 0.45	6.2 tho er banks	99le 99	oro 3 3 divergina di Sembod
27.00		number	FLow	Llow	Tlow	#. a	R.O surface	7.7	3.7.	niwasi rojji
Gage ht.(ft)	Flow (cfs)	Stream name and station number NEAR SOLVANG	Dry - no	Dry - no	Dry - no	3.36 6 est. e foam	2.36 1345 6 est. Clear; Green algae on	3-3-64 3.41 1020 10 est. Clear; grown algae and	3.57 , cet. r f am	3.53 7 cet. inge; veret
Dote	Remarks	Stream name a	10-1-63	11-14-65 1350	12-2-63	1-3-64 0900 Clear; some	2-14-64 1345 Clear; Gre	3-3-64 1020 Clear; gro	h-a-Ch 1 au Clear; com	5-4-64 15eo Yerlewian

MINERAL ANALYSIS OF SURFACE WATER
CENTRAL COASTAL DRAINAGE FROVINGE (T)

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
CENTRAL COASTAL DRAINAGE PROVINCE (T)

	Temp		Specific conduct-	Σ	Mineral co	constituents	ë	ports equivo	parts per equivalents percent re	million per soctance	million			Mineral constituent parts per million	consti	constituents in per million	
DATE SAMPLED	sampled in oF	Н	(micro- mhos at 25°C)	Calcium	Magne- sium Mg	Sodium	Potas -	Carbon- ate CO3	Bicar - bonate HCO ₃	Sulfate SO ₄	Chio- ride	rote NOS	Fluo- ride	Boron	S:1:- ca S:02	Evapl80°C hardness Evapl05°C caCO ₃	Total hordness as CoCO3
Stream name and	station n	number			S	SANTA YNEZ RIVER	EZ RIV	E.R.			45A						
NEAR SOLVANG																	
10- 1-63	-	!	-	1	1	1	1			1	1	}	1	1	1		
11-14-63	1		1 1	1		-	1	1	1	1	1	1	1	1	1		
12- 2-63	1		1	1	1	1	-	-	i i	1	ŀ	1	-		1		
1- 3-64	57	& •	1222	108 5.39	6.41	2.87 19	0.08	24 0 . 80	373 6-11 42	293	1.52	0.01	0.5	0.36	30	840	989
2- 4-64	61	8	1131	92 4•59 34	5.76	3.04	0.08	0	405	270	1.47	0.5	7.0	0.32	27	830	518
3- 3-64	24	7.9	1142	102	74 6.09	2.74 20	0.08	0	420 6 • 88 50	269	1.38	0.5	† • 0	0.32	23	800	559
4- 2-64	56	8 • 1	902	4.64	3.78	2.26 2.26	0.08	0	305	216	1.27	1.0	9.0	0.34	58	640	421
79-7 -5	6 9	8 0	1030	81 4.04 33	5.67	2.57	0.05	0	342	258	1.24	0.01	0	0.37	56	715	486

TABLE D-2 MINERAL ANALYSES OF SURFACE WATER FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES

CENTRAL COASTAL DRAINAGE PROVINCE (T)

Analyzed	by b		DWR DWR DWR
oxygen	Percent		103
Dissolved oxygen	Parts per million		0.6
	Phenol		
r million	Turbidity	1,5A	52
Complitueate, in perts per million	NH4		
Cemalitrees	Syndeta	lver	
	PO4	SANTA YNEZ RIVER	
Collform	MPN/ml		62 62 62
	Md Dieid	number	P.O 62 thdpoles observed Clow
Gage ht.(ft)	Flow (cfs)	Stream name and station NEAR SOLVANG	3.29. 2 cst. flsh and Dry - no Dry - no
Date	Time	Stream name	6-2-64 0930 Clear; small 7-1-64 1635 5-4-64 1015 9-1-64 1350

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I ABLE D-2 MINERAL ANALYSES OF SURFACE WATER CENTRAL COASTAL DRAINAGE PROVINCE (T)

	Total hardness CaCO ₃			535				
luents in	Evaples Cacos			831				
constit	Sili- co SiO ₂			24	1	1	1	
Mineral constituents parts per million	Boron			0.41	ļ	1	1	
	Fluo- ride			1 • 1	-	-	1	
	Ni – trate NO ₃			1.2	1	1	1	
million	Chlo- ride Cl		45A	1.38	1		1	
parts per million equivalents per million percent reactance value	Sulfate SO ₄			5.77	- 1	1	1	
ts per ivalents cent r	Bicar - bonate HCO ₃			373 6-11 46	-	ı	1	
por ts equivo	Carbon- ate CO ₃		R	0	1	1	1	
in	Potas- sium K		EZ RIVER	3 0.08 1		t i		
nstituents	Sodium		SANTA YNEZ	2.70	1		1	
Mineral constituents	Magne- sium Mg		S	73	ł	1	-	
×	Colcium			4.69	1	-	1	
Specific conduct-	micro- mhos at 25°C)			1099	1	1	1	
0, 0	Hd			8 . 1	1	1	ł	
Тетр	when sompled in o F	station n		73	1	ł	-	
	DATE SAMPLED	Stream name and station number	NEAR SOLVANG	6- 2-64	7- 1-64	8- 4-64	9- 1-64	
	DATE	Stream	NEAR	.9	-7	8	6	

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES TABLE D-2

LOS ANGELES DRAINAGE PROVINCE (U)

Analyzed	by b				DWR	DWR	DWR	DWR	DWR	DWR	DWR	DWR
oxygen	Percent				111	83	88	7.9	100	76	107	26
Dissolved oxygen	Ports per million				10.0	0.8	0.6	4.8	10.0	9.6	11.0	10.0
	Phenol											
r million	Turbidity		45B		▲ 25	A 25	A 25	A 25	A 25	A 25	v 25	v
Constituents, in parts per million	4HN											
Constituent	Syndets		EEK									
	PO4		MATILIJA CREEK									
Coliforma	MPN/mi				13	0.6	9.0	2.3	^ 0.45 ^ 0.45	0.6 40.45 ur odor	2.3 in	A A 0 0 4.4 7.7
	Hd DI	number			0.8	7.8	7.8	0.8	7.9 sh observed	7.8 cottom; sulfur	7.9 to recent rain	3.5
Gage ht.(ft)	Flow (cfs)	Stream name and station number			2.38 1.9 n observed	11-14-63 2.42 1645 2.3 Clear; trout observed	2.49 4.0 fur odor	2.48 4.0 fur odor	2-5-64 2.51 1230 5.8 Clear; sulfur odor; fir	2.50 4.5 green algae on	1340 1340 Clear; large flow due	6.8
Dote	Remarks	Stream name		ABOVE DAM	10-2-63 0945 Clear; fish o	11-14-63 1645 Clear; tro	12-3-63 2.49 0945 4.0 Clear; sulfur odor	1-15-64 2.48 1755 4.0 Clear; sulfur odor	2-5-64 1230 Clear; sul	3-4-64 1150 Clear; gre	4-2-64 1340 Clear; lar	5-5-64 1315 Clear

TABLE D-2 MINERAL ANALYSES OF SURFACE WATER

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

LOS ANGELES DRAINAGE PROVINCE (U)

	Total hordness caco ₃		232	435						
constituents in per million	Evapl80°C hordness Evapl05°C caCO3			822	830	800	760	755	640	714
constituen per million	Sili- ca SiO ₂		1	24	20	20	18	18	23	17
Mineral parts p	Boron		2.50	2.90	2.10	2.10	1.50	1.70	0.75	1.50
	Fluo- ride		1	1.6	1.2	1.5	0	1 • 1	0.7	6.
	Ni – trote NO ₃		l	0.5	0.5	0.5	1.0	0.5	1.0	1.8
million	Chlo-	458	104	102 2.88 2.1	2.09	1.86	1.35	1.55	22 0 • 62	1.27
millior per sactance	Sulfate SO ₄		1	288	329	311 6.48 50	304	300	268 5•58 53	313
t en	Bicar - bonote HCO ₃	2.5 4.2 5.5 6.5 6.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7	259	244						
parts equiva percen	Carbon- ate CO3		0 0 0 0 0 0							
i,	Potos- sium K	CREEK	1		0					
constituents	Sod : um	MATILIJA	96	98	3.78	3.74	3.26	3.22	46 2.00 19	2.96
Mineral co	Mogne- sium Mg	W	1	33 2.71 20	3.04	3.13	2.71	34 2 80 23	2.38	2 94 24
Σ	Calcium		1	130	131	123	113	123	121 6.04 58	118 5 • 89 50
Specific conduct-	micro- mhos at 25°C)		1185	1227 130 6.49 48 1211 6.54 151 131 6.54 47 1064 113 6.14 6.14 6.14 6.04 1054 113 6.04 876 123 6.04	966					
0, 0	Н	number	7.9	0	0	0 • 8	7.9	8	8 • 2	8
Тетр	sampled in o F		70	49	88	55	09	61	58	57
	DATE SAMPLED	Stream name and station ABOVE DAM	10- 2-63	11-14-63	12- 3-63	1-15-64	2- 5-64	3- 4-64	4-2-64	5-64

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES

LOS ANGELES DRAINAGE PROVINCE (U)

Analyzed	by b			DWR	DWR	DWR	DWR						
oxygen	Percent			96	101	96	711						
Dissolved	Ports per million			6.5	8.6	0.8	\odots						
	Phenol												
er million	Turbidity	45B		♦	△ 25	1	₹						
Constituents, in parts per million	NH4												
Constituents	Synders	EK					4,0.0						
	PO4	MATILIJA CREEK	MATILIJA CRI				0.02						
Coliforma	MPN/m1										6.0	23.53	23
7	Hd ble	number		7.8	7.7	7.8	fish observed						
Gage ht.(ft)	Flow (cfs)	Stream name and station		2.46	1.7-2-64 2.39 7.1650 1.7 Clear; small fish observed	2.35	2.38 0.9 1'Coun; small						
Dote	Remarks	Stream name	ABOVE DAM	6-2-64 1330 Clear	7-2-64 1650 Clear; smu	8-4-64 1415 Clear	9-1-64 1625 Clear; som						

MINERAL ANALYSICS OF SURFACE WATCH

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

	Total hardness 03 CaCO ₃		431	421	399	0 2 4	
C .	BOOC he		785 4	962	820 3	797	
ituents	TDS Evap105°C Computed		78	7 7	8 2 7 5 5	7 5	
consti	Silt-		18	22	20	22	
Mineral constituents parts per million	Boron		2.30	2.20	2.95	3 • 4 5	
	Fluo- ride		0.5	1.5	1 • 7	89	
	Ni - trate No3		0.1	1.0	1.6	1 0 • 0 2	
million	Chio- ride Ci	458	1.75	2.23	3.24	142	
per	Sulfate SO ₄		293	288	266 5.54	251	
ports per equivalents percent re	Bicar - bonate HCO ₃		243 3.98 34	242 3.97	214 3.51 28	238 3 • 90 30	
ports equiva percen	Carbon- ate CO ₃		0	0	0	0	
i.	Potos-	CREEK	0.08	0.08	3 0 0 0 8	0.10	
constituents	En pos	MATILIJA CREEK	3.30	3.74	101	108	
Mineral co	Magner	W	35 2 88 24	2.88 2.4	2.88 2.33	2.71	
×	Colcium		115	111 5.54	102	5.69	
Specific conduct-	micro- mhos at 25°C)		1054	1087	1139	1234	
,,	Hd	number	7.8	8 • 1	7 • 8	89 • 1	
Тетр	when sampled in o F	station n	79	76	8.5	7	
	DATE SAMPLED	Stream name and s	2-64	2-64	8- 4-64	9- 1-64	
	DATE	Stream	-9	7-	8	6	

ADLE UZ	MINERAL ANALYSES OF SURFACE	FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES	LOS ANGELES DRAINAGE PROVINCE (U)
		FIELD OBSERVATIONS,	

Analyzed	by b			DWR	DWR	DWR	DWR	DWR	DWR	DWR	DWR
oxygen	Percent			105	88	1	93	12.0	1	95	76
Dissolved oxygen	Parts per million			4.6	80.	1	9.5	12.4	1	4.6	9.5
	Phenol										
million	Turbidity	91		4 25	▲ 25	1	4 25	< 25	2000	4 25	A 22
Constituents, in parts per million	NHA								_		
Constituent	Syndets	RIVER		0.08							
	P04	SANTA CLARA RIVER		0.0							
Coliforma	MPN/ml		NE	6.2	50 6.2	!	23	1.3 0.6 alt on banks	t i	5. 6.2 station	23
	nd 0	number	RA COUNTY LINE	8.0	7.8	 en shaken	7.6 rved	8.0 gae; white salt		8.1 done around	7.6 Ksand bases
Gage ht.(ft)	Flow (cfs)	Stream name and station	AT LOS ANGELES - VENTU	3.98	4.15	11-20-63 1235 4 est. Clear; sample foams wh	12-3-63 4.08 1425 1.1 Clear; small fish obse	4.24 1.4 floating al	4.44 15.9 to storm ru	2-5-64 3.84 1630 1.6 Clear; earthwork being	3-4-64 3.84 1630 Clear; barks have quic
Date	Remarks	Stream name	AT LOS ANG	10-2-63 1930 Clear	11-15-63 1205 Clear	11-20-63 1235 Clear; sam	12-3-63 1425 Clear; sma	1-15-64 1345 Clear; red	1-21-64 131.0 Turbid due	2-5-64 1630 Clear; ear	3-4-64 1630 Clear; ban

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TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

	Total hordness CoCO ₃		1473	1289	1175	1249	1227	467	1184	1237	
constituents in per million	Evapl807C hardness Evapl05°C caCo3			2930	2816	2793	2720	900	2549	2715	
constituent per million	Sili- ca SiO ₂		1	16	11	17	17	16	18	10	
Mineral parts p	Boron		1.50	1.36	1.23	1.26	1.16	7700	1.20	1 • 15	
	Fluo- ride		1	0	1 • 0	1.2	1+5	0.7	6 • 0	1.2	
	Ni – trate NO3		1	1.0	0	0.01	0.01	1.5	1.5	0.01	
million	Chlo- ride Cl	94	250	202	177	190	174	1.30	162	163	
millior per actance	Sulfate SO4		1	1567	1489	1530	1440	413 8.60 63	1374 28.61	1419 29.54 72	
len	Bicar - bonate HCO ₃		415	425	331	407	420 6.88 16	3.64	439 7.20 18	407	
ports equivo percen	carbon- ote CO3	RIVER	8	0	0	0	0	0	0	0	
.5	Potas -	CLARA RI	1	0.18	0.20	0.23	7 0 0 1 8	0.28	0.20	0.18	
constituents	Sodium	SANTA CL	526	450	400	430 18.70 43	410	98	380	380	
Mineral co	Magne- stum Mg	S	1	156 12.83 28	131	133	12.34	3.29	133	149	
×	Calcium		1	259 12.92 28	255	281 14.02 32	244 12.18	121 6.04	255 12.72 32	250 12.48 30	
Specific conduct-	ance (micro- mhos at 25°C)		4218	3623	2920	3546	3289	1205	3155	3155	
	H	number O. L.	7.9	7.9	8 • 1	7 • 9	89 • 1	7.2	8.1	0 .	
Temp	when sompled In o F		7.0	09	67	09	\$		62	99	
	DATE SAMPLED	Stream name and station AT L. A VENTURA C	10- 2-63	11-15-63	11-20-63	12- 3-63	1-15-64	1-21-64	7- 5-64	3- 4-64	

FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CMEMICAL ANALYSES TABLE D-2

1111	9
201111000	THO VINCE
Population of	Ē
-	SEL L
00.	200

Analyzod	by b			DWR	DWR	DATE	DAR	DWR	DAR
exygen	Percent			8	ま	11.7	136	156	127
Dissolved exygen	Ports per million			8.6	4.6	9.6	10.8	13.6	10.4
	Phonoi								
r million	Turbidity	34		500	425	A 25	A 22	8 8	V N
Constituents, in parts per million	BH4								
Cenatituent	Syndets	RIVER		0.08 Int					60.
	P04	SANTA CLARA RIVER		0.78 sampling point					0.05
Coliforma	MPN/mi	-02	田	7.8 130 240 out at	13	29	. v v	2.3	13 1.3
Plane and	1000	number	A COUNTY LI	7.8	7.6	7.7	7.4	7.6	7.8
Gage lat.(ff)	Flow (efs)	and station number	AT LOS ANGELES - VENTURA COUNTY LINE		3.72	3.68	3.66	3.63	3.36 0.25 est. 1 fish observed
Dete	Remorks	Streem nemo end	AT LOS ANGE	4-2-64 3.78 1635 2.2 Slightly tarbid; some	5-5-64 1705 Clear	6-2-64 1800 Clear	7-3-64 1420 Clear	8-4-64 1710 Clear	9-2-64 1325 Cleer; mm.1

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MINERAL ANALYSES OF SURFACE WATER

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

		Temp		Specific	Σ	Mineral co	constituents	Ë	por ts equivo	Ten D	million per sactance	million			Mineral constituents parts per million	const	ituents in	
DATE SAMPLED	LED	when sampled In OF	Hd	(micro- mhos at 25°C)	Colcium	Magne- sium Mg	Sodium	Potas sium	Carbon- ate CO ₃	Bicar - bonate HCO ₃	Sulfate SO ₄	Chlo-	Ni - trate NO3	Fluo- ride	Boron	S.11- ca S.02	TDS Evap1059C Computed	Total hardness 0s CaCO ₃
Stream name and station AT L. A VENTURA C	e and s		number). L.	_		S	SANTA CL	CLARA RI	RIVER			94						
79-2-7	49	67	7.0	2907	266 13.27	129	325 14.13 37	10	0	468	1262 26.27 69	143	2.0	1 • 1	1 • 10	25	2470	1195
3-6	79-6	88	7.8	0062	238	11.27	339	0.18	0	403 6.61	1290	144	1.8	1.1	1 • 12	19	2489	1158
9-2-9	79	79	7 • 7	3184	246 12•28 30	12.34	384	0.20	0	371	1427 29.71	175	2.0	1.7	1.36	17	2820	1232
7- 3-64	79	8 2	7 = 7	3556	232	14.23	458 19•91 43	0.20	0	327	1658	212 5.98 13	1.0	1.64	1.45	20	3120	1292
8 - 4 - 8	79.	88	8.2	4735	248 12•38 20	229 18.83 31	684 29.74 49	10	13	214	2288	320	0 • 8	1.6	2.20	1 8	3920	1562
79-2-6	79.	79	0	4556	261	2111	624 27•13 47	0.23	0	273	2171	296 8 35	13	0 • 7	2.00	20	4015	1520

MINERAL ANALYSES OF SURFACE WATER FILED OBSERVATIONS, BACTERICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES TABLE D-2

Gage ht.(ft)	:	Coliforma		Constituent	Constituents, in parts per million	ser million		Dissolve	Dissolved oxygen	Analyzed
	Field PH	MPN/ml	PO&	Syndets	NH4	Turbidity	Phenoi	Ports per million	Percent	by b
1-	Stream name and station number		SANTA CLARA RIVER	RA RIVER		146A				
-										
	7.8	62 62	8.0	40.0		52		0.6	103	DWR
	0.8	23				30		8.2	%	DWR
gh f	None 7.8 30 est. foam; high flow	50.2	90.0	0.08		₹52		9.6	102	DAR
o bear	1-15-64 None 7.4 50 1635 Clear; while salt on bank; dead fish in water	50 62 h in water				425		11.6	113	DWR
None 20 est.	0.8	△ 0.45 △ 0.45				425		11.8	123	DWR
None 15 est.	7.8	23				425		0.11	115	DWR
1515 220 est. Turbid; some foam; large	7.6 Flow due to	62 62 o recent rai	0.08	90.0		750		9.8	86	DWR
None 25 est. vegetation f	7.6 62 1.3 floating in the water	62 1.3 the water				A 25		10.8	Ħ	DWR
							_			

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

	Temp		Specific conduct-	×	Mineral co	constituents	. <u>c</u>	parts equiva percer	ten t	millior per soctonce	million			Mineral constituents parts per million	consti	fuents in	
DATE SAMPLED	when sampled	H	ance (micro- mhos at 25°C)	Calcag	Magne- sium Mg	E 7 0 2	Potas-	Carbon- ate CO ₃	Bicar - bonote HCO ₃	Sulfate SO ₄	Chlo- ride	Ni - trate No3	Fluo- ride	Boron	Sili- ca SiO ₂	TDS Evap180°C Evap105°C Computed	Total hardness os CaCO ₃
Stream name and station NEAR SANTA PAULA	ation	number			0,	SANTA CL	CLARA RI	RIVER			46A						
10- 2-63	73	8 . 1	1936	1	1	147	1	l l	336	ļ I	1.97	1	1	0.86	1		832
11-15-63	49	7 . 8	1996	204 10.18 42	6.99	160	0.18	0	344 5 . 64	788 16•41 68	7.1 2.00 8	7.0	1.0	0 • 92	26	1555	859
12- 3-63	65	0 • 0	1972	198 9•88 41	82 6•74 28	165	0.18	0	356 5.83 24	765 15.93 66	2.06	8.5 0.14	1 • 0	0.92	27	1545	832
1-15-64	58	7.9	2315	225 11•23 38	111 9•13 31	210	0.20	0	364 5.97	995	2 88	11 0.18	1.4	1.04	28	1910	1019
2- 5-64	79	8 • 1	1855	189 9•43 41	6.50	162 7.04 30	0.18	0	344	744	1.97	9.0	1 • 5	06 • 0	52	1550	797
3- 4-64	79	7 • 8	1832	200	6.25	150	0.15	0	322 5.28 23	740 15•41 68	1.89	8 • 0 0 • 13	6.0	0 • 86	27	1515	812
4- 2-64	99	7.6	687	3.84	1.89	38	0.08	0	159 2.61 36	197	21 0.59	2.5	0.7	0 • 58	20	475	287
5- 5-64	62	7.3	1901	198 9.88 41	6.83	162	0.15	0	283	765 15.93 68	2.79	8.2 0.13	1.0	1.00	56	1566	836

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES LOS ANGELES DRAINAGE PROVINCE (U)

Analyzed	by b			DWR	DWR	DWR	DWR
oxygen	Percent			112	12.7	127	8
Dissolved oxygen	Parts per million			10.2	11.4	11.2	¢.
	Phenol						
r million	Turbidity	1 [†] CA		<u>^</u>	\$ 55	1	\$\circ\$
Constituents, in parts per million	NHA						
Constituent	Synders	A RIVER					
	PO4	SANTA CLARA RIVER					
Collform	MPN/mi			23.0	62	700 240	240
	Hd DI	number		7.6	7.6	7.8	4.7
Gage ht.(ft)	Flow (cfs)	Stream name and station number	PAULA	None 15 est.	None 15 est.	None 12 est.	None 10 est.
Date	Remarks	Stream name	NEAR SANTA PAULA	6-2-64 1530 Clear	7-3-64 1305 Clear	P-14-64 1540 Clear	9-2-64 1100 Clear

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

	Temp		Specific conduct-	2	Mineral co	constituents	.E	parts equiva percen	e Pe	st million is per million reactance value	million		2	Mineral constituents parts per million	constituent per million	fuents in	
DATE SAMPLED	when sampled In °F	Hd	ance (micro- mhos at 25°C)	Calcium	Magne- sium Mg	wn:poS	Potas -	Carbon- ate CO ₃	Bicar - bonate HCO ₃	Sulfate SO ₄	Chlo- ride	ni – trate NO3	Fluo- ride F	Boron	S.11 ca S.10 ₂	Evapl80°C hardness Evapl05°C caCO ₃	Total hordness caco ₃
Stream name and station NEAR SANTA PAULA		number				SANTA	SANTA CLARA RIVER	IVER			46A						
9-2-9	69	7 - 7	2372	249	106 8•72 28	220 9.57 31	0.20	0	340	1061 22.09	2.43	7.6	1 • 1	1.20	24	2100 1058	1058
7- 3-64	70	7.7	2343	238	110	9.22	0.20	0	328 5 • 38 18	1082 22.53	88 2 • 48	10	1 • 2	1.00	8	2132	1047
8- 4-64	72	8 0	2084	216 10•78 40	7.65	186 8 • 09 30	0.18	0	330	889 18.51 71	76 2.14	8 0 • 13	1 • 2	1.00	29	1800	922
79-2-6	79	7.9	2278	242 12•08 42	7.90	196 8.52 30	0.20	0	347	970 20.20 71	88 2.48 9	0.13	1 • 4	1.02	29		1000

MINERAL ANALYSES OF SURFACE WATER TABLE D-2

ANALYSES	
L CHEMICAL	
ADDITIONA	ICE (U)
DETERMINATIONS, AND	S DRAINAGE PROVIN
O DESERVATIONS, BACTERIOLOGICAL	LOS ANGELES DRA
FIEL	

Analyzed	by b		DWR	DWR	DWR	DWR	DWR	DWR	DWR	DWR
Dissolved oxygen	Percent		100	66	86	611	104	66	₹.	96
Dissolved	Ports per million		0.6	8.	10.0	13.0	10.2	4.6	8.6	10.0
	Phenoi	ņ								
r million	Turbidity	19ti	4 25	4 25	₹ 25	A 25	A 25	A 25	▲ 25	Λ (2)
Constituents, in parts per million	NH4									
Constituent	Syndets	3.K								
	PO4	PIRU CREEK								
Coliforma	MPN/ml		13 700 + ater	23.33	23.3	2.3	0.0	23	6.2	8.3 6.2 Reservoir
Field of		number	8.0 ers in the v	8.2	8.0 rved	8.0	8.1 some foam	7.8	7.6	7.8 Santa Felicia
Gage ht.(ft)	Flow (cfs)	Stream name and station number NEAR PIRU	10-2-63 ivone 8.0 13 1245 10 est. 700 + 511ghtly turbid; swimmers in the water	None 12 est.	12-3-63 None 1405 5 est. Clear; small fish observed	None 3 est.	2-5-64 None 1555 5 est. Clear; yellewish tinge	None 3 est.	None 4 est.	5-5-64 Clear; released from St
Date	Remarks	Stream name NEAR PIRU	10-2-63 1845 Slightly t	11-15-63 1110 Clear	12-3-63 1405 Clear; sma	1-15-64 1415 Clear	2-5-64 1555 Clear; yel	3-4-64	4-2-64 1615 Clear	5-5-64 1630 Clear; rel

TABLE D-2 MINERAL ANALYSES OF SURFACE WATER

	Total hordness os CaCO ₃		637	059	50 00	692	753	169	827	794
constituents in	Evap180°C hordness Evap105°C caCo ₃			1180	1090	1275	1570	1270	1530	1445
constituent per million	S.11 ca S.02		t t	54	17	20	20	∞	23	1 8
Mineral parts p	Boron		1.20	1.34	1.26	1.28	1.50	1.35	1.60	1 • 90
	Fluo-		1	1.1	1.2	5	9	1 • 2	1.3	1 • 1
	Ni – trate NO ₃		1	0.5	1.0	0.01	11 0.18	1.0	0.5	0 0 0 0 0 0 1
million value	Chlo- ride	794	39	37	35	42 1.18	53	1.27	1.41	1.44
millio per sactance	Sulfate SO ₄		P.	584 12.16 66	545 11•35 67	621 12.93	785	629 13.10 68	761 15.84 68	727 15•14 68
ports per equivalents percent re	Bicar - bonate HCO ₃		3.88	322 5.28 2.9	283	298 4.88	361	293	368 6.03 26	344
por fs equivo percer	Carbon- ofe CO3		7 0 • 23	0	0	14 0 • 47	0	0	0	0
<u>.</u> <u>e</u>	Potas- sium K	EK	1	7 0 • 18	7 0•18 1	0.18	0.18	0.15	7 0.18	0.15
constituents	Sodium	PIRU CREEK	120	125	120	138	200	126 5.48 28	155 6 74 29	151 6.57 29
Mineral co	Magne- sium Mg	d.	1	5.59	5.26	6.25	7.32	73 6.00 31	85 6.99	85
Σ	Calcium			148	132 6.59	152 7.58 38	155	159 7.93 41	191 9.53 4.1	178 8 • 88 39
Specific conduct-	once (micro- mhos at 25°C)		1572	1565	1464	1675	1894	1582	1825	1773
	H	number	80	0 • 0	0 .	φ •	7.9	7.9	0 • 8	7 • 7
Temp	when sampled in °F	1	70	61	58	53	62	65	8 9	8 9
	DATE SAMPLED	Stream name and station NEAR PIRU	10- 2-63	11-15-63	12- 3-63	1-15-64	2- 5-64	3- 4-64	4- 2-64	5 - 5 - 64

MINERAL ANALYSES OF SURFACE WATER FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES THE POST SOUNDED SOUNDED SOUNDED SOUNDED TABLE D-2

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Anolyzed	by b		DWR	DWR	DWR	DARR	
oxygen	Percent		721	152	128	*	
Dissolved oxygen	Ports per million		10.8	12.0	10.4	0.6	
	Phenol						
r million	Turbidity	294	₹ 52	₹ 25	₹ 25	A 79	
Constituents, in parts per million	NH4						
Constituent	Syndets	V					
	PO4	PIRU CREEK					
Coliforma	MPN/ml		6.2	23 130	62 62 62	240 240	
100	Ties pr	nember	7.8	7.9	7.8	r.	
Gage ht.(ft)	Flow (cfs)	Streem neme and station number	None 0.5 est.	None 1 est.	None 0.5 est.	None 0.25 est.	
Date	Remorks	Streem neme	6-2-64 1730 Clear	7-3-64 1405 Clear	8-4-64 1650 Clear	9-2-64 1305 Clear	

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

	Total hardness as CaCO ₃		802		199		747			761						
ituents in	Evapl80% hardness Evapl05% as Computed CaCO ₃		1548	1444	1277	1225	1407		1341	1460		1354				
const	S.11+- co S.10 ₂		14		37		20	7		23						
Mineral constituents parts per million	Boron		1.95		1.50		1.85			1.80						
	Fluo-		1.6		1.4		1.5	1		1 • 7						
	Ni - trote NO3		1.0	0.02	1	0.02	2	0.03		7	0.02					
million	Chio- ride Ci	794	55	1.55	77	1.24	51	1.44	7	55	1.55	7				
ports per million equivalents per million percent reactance valu	Sulfate SO ₄		805	16.76	674	14.03	741	15.43	73	727	15.14	7.1				
ports per equivalents percent re	Bicar - bonate HCO ₃		271	4.44	231	3.79	257	4.21	20	286	69.4	22				
por	Carbon- ate CO3		0		0		0			0						
ë	Potas- sium K	Æ	9	0.15	7	0.18	7	0.18	1	7	0.18	-				
constituents	Sod - um	PIRU CREEK	162	30	127	5.52	147	6.39	30	144	6.26	58				
Mineral co	Magne- stum Mg	а.	80 6	1.54	74	6.09	87	7.15	33	80	6.58	30				
2	Colcium		176	38	145	7.24	156	7.78	36	173	8.63	0 4				
Specific conduct-	micro- mhos at 25°C)		1838		1564		1736			1778						
	Ha	umber	8 • 0		7.9		8 • 1			7.9						
Тетр	sampled in o F	station	76		83		80			99						
	DATE SAMPLED	Stream name and station number NEAR PIRU	77-6-7	1017		3-64		79-7 -			- 2-64					
	DATE	Stream nam		0	,	7-		8-			-6					

TIONAL CHEMICAL ANALYSES TABLE D-2 FIELD OBSERVATIONS, BACTE

	- DETERMINATIONS, AND ADDITION	î
TER	100	=
WA	0	NC
ACE	A	0
URF/	NS.	PR
F S	ATIC	1GE
5 0	2	IN
YSE	ER	DRA
ANALYSES OF SURFACE WATER	DE	LOS ANGELES DRAINAGE PROVINCE (U)
7	AL	ELE
MINERAL	TERIOLOGICAL	NG
Z	101	SA
	TER	07

Analyzed	py p		DWIR	DWR	DWR	FGL	DWR	DWR	FGL	DWR
oxygen	Percent		106	110	106	1	56	10%	1	103
Dissolved oxygen	Parts per million		9.5	10.8	2.11.2	1	9.6	11.0	:	10.%
	Phenol								1	
r million	Turbidity	Ф94	50	A 25	A 50 87	8 1	4.25	A 22 25	1 1	A 25
Constituents, in parts per million	NH4									
Constituents	Synders	K								
	P04	SESPE CREEK								
Coliforma	MPN/ml		53	9 c.	2.3 <0.45	1	2.0	6.8	;	က က
1	E 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	number	8.14 suriace	8.2 face	P.O face; fish	1	a.7.	8.1 nt high flow	1	7.6 face
Gage ht.(ft)	Flow (cfs)	Stream name and station number	2.19 2.6 Lick on	11-15-63 2.30 8.2 1015 18 Clear; oil slick on sunface	12-3-63 2.29 P.o. 1305 1305 Clear; oil slick on surface; fish	2.46	1.97	2-5-64 2.77 8.1 1305 21.77 Clear; evidence of recent high flow	2.38	3-4-64 2.17 7. 1550 2.4 Clear; oil slick on surface
Date	Remarks	Stream name a	10-2-63 1800 Turbid; oi	11-15-63 1015 Clear; oil	12-3-63 1305 Clear; oil	12-3-63	1-15-64 1505 Clear	2-5-64 1305 Clear; evic	3-3-64	3-4-64 1550 Clear; oil.

MINERAL ANALYSES OF SURFACT, WATCH

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

	Temp		Specific conduct-	2	Mineral co	constituents	, c	ped	equivolents percent re	00	per million tance value		-	Mineral parts p	constituents per million	uents in lion	
DATE SAMPLED	when sompled In oF	T a	(micro- mhos at 25°C)	Calcium	Magne- sium Mg	Sodium	Potes- Sium K	carbon- ate CO3	Bicar - bonate HCO ₃	Sulfate SO ₄	Chlo- ride	No - trote	Fluo- ride F	Boron	S:1:-	TDS Total Evapl80% hordness Evapl05% CaCO3	Total hordness as CaCO ₃
Stream name and	station r	number				SESPE CR	CREEK				794						
10- 2-63	74	7.9	1270	1		122		1	246	1	3.61	1	1	2.30	1		396
11-15-63	62	8.1	1138	4.39	2.22	118 5.13	0.08	0	203	218	135 3 • 81 33	0.0	1 • 8	3.10	12	7007	331
12- 3-63	56	7.9	1221	107	34 2.80	118 5.13 38	0.10	0	3.88	314 6.54	100 2 - 82 21	0.01	7.4	2.30	22	820	407
12- 3-63	1	8.1	1242	125	31 2.55	113	1	1	223	357	2.71	1	1.8	2.65	1	866	0 7 7
1-16-64	24	89	1477	159	3.62	129 5.61	0.10	0	281 4.61 27	481 10.01 59	2.45	0.01	2 • 4	2.40	17	1060	578
2- 5-64	75	80	1127	11115-54	2.80	102	0.08	0	232	349	1.78	1.0	2.2	1.70	1 7	860	417
3- 3-64	-	8.	1253	119	32 2.63	103	i i	1	3.72	354	2.17	}	1.9	2.15	1	871	459
3- 4-64	51	7 . 9	1242	132 6 59 46	38 38 22 22	107	0.08	0	251	390 8 • 12 57	74 2.09 15	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1.7	2.00	17	895	486

FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES MINERAL ANALYSES OF SURFACE WATER TABLE D-2

Analyzed	by b		DWR	DWR	FGL	DWR	DWR	DWR	FGL	DWR	
oxygen	Percent		101	113	;	116	149	153	3 1	130	
Dissolved oxygen	Ports per million		10.6	12.0	1	8.6	12.2	11.8	3 E	11.2	
	Phenol										
r million	Turbidity	α9η	325	A 25	1	A 25	A 25	i	1	A 23	
Constituents, in parts per million	NH4										
Constituent	Syndets	3EK									
	P04	SESPE CREEK									
Coliforma	MPN/ml		240 62 recent rain	1	:	1.3	6.0	5.0	1	w.v.	
2	на вівід	num ber	8.0 240 62 flow due to recent rain	7.9	;	7.8	7.6	7.6	!	2.5	
Gage ht.(ft)	Flow (cfs)	Stream name and station number WEAR FILLMORE	4-2-64 3.86 1555 236 Turbid; high, rapid -	2.68	1.87	1.86	1.95 0.4 en algac	1.92	1.98	1.97 0.2 ects	
Date	Remarks	Stream name on WEAR FILLMORE	4-2-64 1555 Turbid; h	5-5-64 1538 Clear	6-1-64	6-2-64 1645 Clear	7-3-64 1340 Clear; green	8-4-64 1620 Clear	9-1-64	9-2-64 1.9 1230 0.2 Clear; insects	

TABLE D-2 MINERAL ANALYSES OF SURFACE WATER

Total Sec hordness Sec CaCO ₃		257	356	5 739	969	468	664	514	445
		368	799	1306	1255	1019	1040	1027	940
Si02		14	12	ŀ	19	14	13	1	11
Boron		0.50	1.80	1.77	1.75	1.95	2 • 2 5	2.43	2.30
Fluo- ride F		0.7	1 • 7	1 • 4	1 • 6	1 • 6	1 • 5	1 .3	1.6
NI - trate NO ₃		1.5	0.0	}	1.2	0.02	1.8	1	0.02
Chlo- ride Cl	460	15 0 42	1.78	1.92	1.89	2.37	101 2.85	121	121 3.41 24
Sulfate SO ₄		3.44	283	690	632	467	469	418	382 7.95 56
Bicar - benate HCO ₃		156 2.56 40	183 3•00 28	258	233	188 3.08 20	165 2.70 18	188	173 2.84 20
Carbon- ate CO3		0	0	-	0	0	0	ŀ	0
Potas -	EEK	0.05	3 0 • 0 8	1	0.13	0.13	0.13	1	0.10
E 7 00 N		30	3.65	129	122 5.30 27	118 5.13 34	128 5.57 36	128	120
Magne- stum Mg	S	1.64	30	63	4.52	3.21	3.29	34	2.55
Colerum		3.49	4.64	192	188	135	134 6.69	134	127 6.34 45
micro- mhos at 25°C)		589	696	1733	1567	1344	1389	1486	1330
I a	number	7 . 8	7.6	0 .	7 . 8	7 - 7	7.6	7.9	0 .
when sompled in o F	station	26	ψ.		76	08	8 5		74
TE SAMPLED	am name and RFILLMORE	4- 2-64	5- 5-64	6- 1-64	6- 2-64	7- 3-64	8- 4-64	9- 1-64	9- 2-64
	Once (Micro- Colcium Magne- Sodium Potas- Carbon Bicar- Sulfate Chio- Ni- Fluo- Boron Sill- TOS (Peoplish Chio- Inde 17016)	when pH (micro-colcium Magne-sodium Potas-Carbon-Bicar-sulfate chlo-living mhos) In Possible Colcium Magne-sium Sium of the potas-sulfate chlo-living ride stopings at 25°C) In Possible Colcium Magne-sium Sium of the potas-sulfate chlo-living ride stopings sodium of the color ride stopings ride sium of the color ride stopings ride sion sium sium of the color ride stopings ride sion sion ride stopings ride sion sion ride stopings ride sion sion ride sion sion ride sion sion ride sion ride sion sion ride sion sion ride sion ride sion ride sion sion ride sion ri	when sumpled supplied at 25°C; PH (mhos in order) Colcium when summer Potos in order (mhos in order) Succession of the colcium of the station number Sumpled colcium when single colcium of the station number Sumpled colcium of the single colcium of t	Supple PH Once Solium Potos Carbon Bicar Sulfate Chlo Ni Fluo Boron Sili TOS Computed Sili Sil	when sumpled supplementary PH (most ordinary sampled in processor) Most ordinary sampled in processor (a) and a station number Solution number Catchin when sampled in processor (a) and a station number Catchin number Catchin when sampled in processor (a) and a station number Act of a station number Catchin when sampled in processor (a) and a station number Act of a station number Catchin when sampled in processor (a) and a station number Act of a station number	Supply Color Color Mode Sodium Potas Carbon Bicar Sulfate Chio C	when sumpled in Particle pH (mics of a line) (and a lin	Manual	Section Part Conference Section Royal Section Sect

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES TABLE D-2

FERIOLOGICAL DETERMINATIONS, AND ADDITIC LOS ANGELES DRAINAGE PROVINCE (U)

Field pH	Coliforma	Ca	Constituent	Constituents, in parts per million	er million		Dissolve Ports per	Dissolved oxygen	Analyzed
-	P04		Syndete	NH4	Turbidity	Phenol	million	Saturation	by b
SANTA	SANTA	PAUL	SANTA PAULA CREEK		46E				
00/					42%		12.2	139	DWR
13 6.2	0.70		0.03		\$2. V		8.0	55	DWR
6.2	0.02		0.12		V		10.6	101	JWR
1					1		!	1 1	FGL
6.2 0.00	0.00		90.0		A 25		7.	76	DWR
i					3500		!	:	DWR
1					1		!	1	DWR
9.0					Λ 20		0.11	107	DWR

*New gage

TABLE D-2 MINERAL ANALYSES OF SURFACE WATER

	Temp		Specific	×	Mineral co	constituents	ï	be ed	parts per equivalents percent re	000	million per million tance value			Mineral	constituents per million	tuents in	
DATE SAMPLED	when sampled in o F	H d	mhos at 25°C)	Colcour	Magne- sium Mg	Enipos No	Potas-	Carbon- ote CO3	Bicar - bonate HCO ₃	Sulfate SO4	Chlo- ride Cl	Trope NO.	Fluo- ride	Boron	S.II co S.O.2	T D S Total Evap180°C hardness Evap105°C 03°C Computed	Total hardness os CaCO3
Stream name and station NEAR SANTA PAULA	station	number			S	SANTA PA	PAULA CR	CREEK			46E						
10- 2-63	72	7.9	1222	-	4	116	1	1	312	1	84	ł	1	0.59	1		402
11-15-63	61	7.9	1196	100	2.96	120 5 • 22 39	0.08	0	325	271	2.31	0.01	7 • 0	0.70	35	780	398
12- 1-63	56	φ 80	1144	5.79	35 22 22	96	0.05	0	305	285 5.93	1.89	1.0	9.0	04.0	2 2	780	767
12- 6-63	1	7 - 7	1190	116	33	4.13	-	1	287	277	1.97	1	7.0	0 * 0 0	1	782	425
1-15-64	25	8 • 1	1106	96 4.79	3.13	100	0.05	С	298	270	1.92	1.0	9.0	0.50	15	735	308
1-22-64	64	7 • 7	803	4°39	23	2.61	0.05	0	224 3.67 41	197	38	2.5	9.0	ty 9 • 0	2	570	314
1-23-64	55	8 • 2	860	2.94	56	64 2 • 78 27	2 0 0 0 2	0	253	240	1.30	3.2	0.5	0.33	11	642	378
5-64	58	0 • 8	922	86 4.29 41	2.55	3.57	0.05	0	259	239	1.41	1.0	9 • 0	0.36	15	989	342

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES TABLE D-2

Analyzed	py p		FGL	DWR	DWR	DWR	FGL	DWR	DWR	DWR
oxygen	Percent		1	104	109	101	1	141	152	137
Dissolved oxygen	Parts per million		}	10.2	11.4	11.0	:	11.8	13.4	11.0
	Phenol	玉								
r million	Turbidity	王9 竹	1	A 25	V 25	₹ 52	1	A 25	∆ 25	1
Constituents, in parts per million	NH4									
Constituent	Syndets	CREEK				90.0				
	PO4	SANTA PAULA CREEK			d	0.0				
Coliforma	MPN/mi		1	0, 0, 0, 0,	6.2 13 o recent rai	40.45	1	6.2	13	23 3.3
2	Hd 0	number	1	6.7	7.8 e flow due to	7.8	1	7.9	8.0	2.8
Gage ht.(ft)	Flow (cfs)	Stream name and station number NEAR SANTA PAULA	1.50	1.78* 3.6 scme foam	2.34* 32 insects; large	1.78* 6.9 ne foam	1.43	1.66* 2.2 me foam	1.53* 0.9	1.44*
Dote	Remarks	Stream name and st NEAR SANTA PAULA	3-3-64	3-4-64 1310 Clear; so	4-2-64 1450 Turbid; p	5-5-64 1.78* 1430 6.9 Clear; some foam	6-1-64	6-2-64 1455 Clear; some	7-3-64 1230 Clear; foam	8-4-64 1505 Clear

*New gage

*New gage

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

			Specific conduct-	2	Mineral co	constituents	Ē	pod	ports per equivalents percent rea	-	million per million stance value			Mineral	constituents per million	fuents in	
DATE SAMPLED	sampled in o F	H _d	(micro- mhos at 25°C)	Caterum	Mogne-	E n po N	Potas- sium K	Carbon- ate CO3	Bicar - bonate HCO ₃	Sulfate SO ₄	Chlo- ride	rote No3	Fluo- ride	Boron	S:11-	Evaple9c hardness Evaplo5°C caCo3	Total hardness CaCO3
Stream name and station NEAR SANTA PAULA	and station PAULA	number			0)	SANTA PA	PAULA CR	CREEK			46E						
3- 3-64	1	7.7	1172	104	35.	3.96	1	1	290	270	1.75	!	7.0	0.57	1	725	707
3- 4-64	62	0	983	88 4•39 39	2.80	3.91	0.05	0	254	259	1.61	0.01	9.0	0.42	14	690	360
4- 2-64	56	8 • 1	164	3.19	1.07	1.22	0.03	0	166 2.72 49	2.44	15	1.0	0 • 4	0.12	19	330	213
5- 5-64	54	7 • 9	896	4.29	2.47	3.17	0.05	0	251	221	1.30	1.6	9 • 0	0 38	6	614	338
6- 1-64	-	7 • 8	1057	46.4	2.38	3.78	1	-	299	229	1.69	1	7.0	0 - 86	1	725	366
6- 2-64	77	88	006	3.89	2.47	3.57	0.05	0	3.69	227	1.49	0 • 0	9.0	74.0	14	630	318
7- 3-64	72	0 0	1020	82 4•09 37	2.80	4.22	0.05	0	256	5.18	1.86	2 0 • 0 3	9 • 0	0 48	56	708	345
79-7 -8	8 1	7.9	1186	3.44	2.80	147 6 39 50	0.05	0	259	5.73	2.82	1.0	0.7	06.0	17	800	312

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

MINERAL ANALYSES OF SURFACE WATER FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES LOS ANGELES DRAINAGE PROVINCE (U)

Analyzed	by b		FGL	DWR
	Percent		1	136
Dissolved oxygen	Ports per million		1	13.2
	Phenol			
million	Turbidity	16E	1	A 7.5
Constituents, in parts per million	NH4			
Constituents	Syndets	A CREEK		
	P04	SANTA PAULA CREEK		
Coliformo	MPN/ml		1	0 7 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9
:	0	number	1	u .
Gage ht.(ft)	Flow (cfs)	Stream name and station number NEAR SAUTA PAULA	1.32	0.1 0.1
Dote	Remarks	Stream name and	9-1-64	9-2-64 1010 1010

MINERAL ANALYSES OF SUPERCE WATER

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

	Temp		Specific conduct-	2	Mineral constituents	nstituents	Ē	parts equiva percen	parts per equivalents percent re	million per sactance	million			Mineral constituents parts per million	const er m	ituents in	
DATE SAMPLED	when sampled In ° F	Hd	mhos at 25°C)	Colcium	Magne- sium Mg	Sod ium	Potos -	Carbon- ate CO ₃	Bicar - bonate HCO ₃	Sulfate SO ₄	Chio-	rote NO3	ride F	Boron	Sili- ca SiO ₂	T D S Evap 180°C Evap 105°C Computed	Total hardness as CaCO ₃
Stream name and station NEAR SANTA PAULA		number			0)	SANTA PAULA CREEK	AULA CR	EEK			46E						
9- 1-64	1	80 W	1404	92	3.04	149	1	1	378	241	106	1	0 4	1.07	1	1127	382
9- 2-64	63	7 • 8	1328	4.84	3.21	146	0.08	0	356 5 • 83 40	274 5 • 70 39	3.05	0.02	0.7	98.	17	895	403

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES TABLE D-2

Anolyzed	ph p			LACHD	LACHD	LACHD	LACHD	LACHD	DWR	LACHD	DWR
oxygen	Percent			81	61	173	75	93	108	131	35
Dissolved oxygen	Ports per million			7.04	6.4	18.2	7.3	4.6	9.6	11.75	ф°ф
	Phenoi	7		0	00.00	10.0	£0°0			40.0	
r million	Turbidity	24							30		35
Constituents, in parts per million	NH4										
Constituents	Syndets	ES RIVER									
	P04	LOS ANGELES RIVER									
Coliforma	MPN/mi			110	15	110+ sty odor	110+	9.3 = 2.5 ppm	620	11.5	230 230 algae
He Alein		number		8.0	7.9	8.2 110+ pw color, musty odor	0.80	day B.O.D.	0.8	ω α.	8.4
Gage ht.(ft)	Flow (cfs)	Stream name and station number	OA STREET	0.57	0.01	1-8-64 0.02 1340 0.05 Slightly turbid; yello	0.03	0.01 0950 0.05 0.01 and grease: 0.0; 5	0.05 0.4 ne foam	0.05	8-5-64 0.03 8.4 1945 0.01 Clear; trash in streambed; green
Date	Remarks	Stream name	AT FIGUEROA STREET	10-2-63 1058 Clear	12-4-63 1020 Clear	1-8-64 1340 Slightly t	3-4-64 1145 Clear	1-8-64 0950 0il and @	5-6-64 1505 Clear; some	6-3-64	8-5-64 1945 Clear; tre

MINERAL ANALYSES OF SURFACE WATER

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

	Total hardness os CaCO ₃		617	363	437	389	317	356	399	346	
constituents in	Evap180°C hardness Evap105°C as Computed CaCO ₃		1386	1315	1636	1065	1190	1492	1655	1829	
constituent per million	Sili- ca SiO ₂		1	1	}	\$	ł	19	1	~	
Mineral parts p	Boron		1	ł	}	}	1	1 • 80	ł	1.70	
	Fluo-		1	1	1	1	1	8 .	1	1 • 1	
	rote NO ₃		0	2.2	2.1	0 • 0 • 0	0	1.4	0.0	1.0	
million	Chlo- ride	47	440 12.41 38	300	344	200	266	393 11.08	414	447	
er million ts per million reactance value	Sulfate SO ₄		601 12.51 38	275	489 10•18 43	276 5.75 38	236	302	383	624 12.99 47	
len	Bicar - bonate HCO ₃		300	365	217	235	335	454	328	120	
par ts equiva percen	Carbon- ate CO ₃	/ER	2.67	0	0	0	0	0	0	0	
.c	Potas- sium K	ES RIVER	1	l i	1	i i	0.15	0.20	ł	0.26	
constituents	Sodium	LOS ANGELES	414 18.00 59	315	340 14•78 63	200	307	403	418 18•17 70	463 20.13	
Mineral co	Magne- stum Mg	۲۷	6.74	2.71	51 4•19 18	32 2.63	2.55	35 2.88	3.78	4.03	
- to	Calcium		112 5.59	91 4.54	91 4.54	103	3.79	4.24	84 4.19	58 2.89 11	
	micro- mhos at 25°C)				2335	2704	2704				
	Hd	number	1	1	8 • 2	1	8 • 1	7.7	8 • 2		
Temp	when sampled in o F	ioi	74	58	26	62	09	7.1	70	78	
	DATE SAMPLED	Stream name and station AT FIGUEROA STREET	10- 2-63	12- 4-63	1- 8-64	3- 4-64	49-8-4	5- 6-64	6- 3-64	8- 5-64	
	DAT	Streo AT F	10				,				

MINERAL ANALYSES OF SURFACE WATER FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES TABLE D-2

LOS ANGELES DRAINAGE PROVINCE (U)

Analyzed	by b		DWR
oxygen	Percent		192
Dissolved oxygen	Parts per million		24.2
	Phenol	14	
ir million	Turbidity	7	4 2.5
Constituents, in parts per million	NHA		
Constituent	Syndets	LOS ANGELES RIVER	
	PO ₄		
Coliforma	MPN/ml		
3	Hd Pier	number	8.4
Gage ht.(ft)	Flow (cfs)	Stream name and station number AT FIGUEROA STREET	9-14-64 0.08 1330 0.05 Yellow color, floating
Dote	Remarks	Stream name and standard AT FIGUEROA STREET	9-14-64 1330 Yellow col

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TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

	Temp		Specific conduct-	2	ineral co	Mineral constituents	ë	ports equiva percen	parts per equivalents percent re	millior per soctonce	million			Mineral constituents parts per million	consti	tuents in	
DATE SAMPLED	when sampled in ^o F	Hd	mhos at 25°C)	Colcium	Magne- sium Mg	wn pos	e suca	Carbon- ate CO3	Bicar - bonate HCO ₃	Sulfate SO ₄	Chio-	rote NO3	Fluo- ride F	Boron	Sili- co SiO ₂	EvapleSc hardness EvaplOSc os Computed CaCO3	Total hardness caco ₃
Stream name and station AT FIGUEROA STREET	60	number				LOS ANGELES RIVER	LES RI	VER			4.7						
9-14-64	6	6	2395	3,49	5.35	372 16.17	0.18	0 • 2 2 8 8	2 124 0 0 3 8	613 12,76 50	0 4 % % % % % % % % % % % % % % % % % % %	0 * 2 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	8 °	1.75	14	1624	7 4 4

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES TABLE D-2

LOS ANGELES DRAINAGE PROVINCE (U)	

Dote	Gage ht.(ft)		Coliforma		Constituent	Constituents, in parts per million	er million		Dissolve	Dissolved oxygen	Anolyzed
Remarks	Flow (cfs)	Hd DIe	MPN/ml	PO ₄	Syndets	NH4	Turbidity	Phenol	Parts per	Percent	by b
Stream name and stat	e and station	ion number		LOS ANGELES RIVER	SRIVER		848				
AT PACIFIC	AT PACIFIC COAST HIGHWAY	X									
10-2-63	0.46	7.7	473					10.0	0,10	94	Гиры
Marked turl	Marked turtidity; green color; heavy algae; 5-day BOD = 67	color; heav	y algae; 5-d	uy BOD = 67	uidd						
11-13-63	94.0	7.3	13000					0.18	0.2	Ĉ.	LBDPH
Marked turk	Marked turbidity; brownish color; 9-day MOD = 91.5 ppm; oil and grease = 13 ppm	ish color;	-day BOD = 9	4.5 ppm; oi	and grease	= 13 ppm					
12-4-63	0.45	7.5	0.29					0.15	0.35	8	ГВОРН
Marked turk	Marked turbidity; brownish color; 9-day BOD = 16.0 ppm; oil and reage = 10.0 ppm	ish color;	-day BOD = 14	6.0 ppm; oi.	and rease	= 10.0 ppm					
1-8-64	05.0	0.8	7.0						3.6	35	LEDPH
Very turbic	sh	blor; 9-day	color; 5-day BoD = 102.6	opm; oil and	rease = 1.1		ppm; Alkalinity (CaCO3) = 314 ppm	= 314 ppm			
2-5-64	09.0	7.5	130					n.60	1 1	1	LEDPH
Marked turk	Marked turtidity; brownish color; hydrocarbon cdor; 5-day Fol = 212	ish color; k	ydrocarbon c	dor; 5-day 1	(ol) = 212 ppm	; oil and ga	ppm; oil and grase = 10.0	ppm; Alkalin	ppm; Alkalingty (CaCO3) = 110 ppm	1119 ppm	
3-4-64	0.61	7.6	130					0.10	0.5	9	LBDPII
Marked turi	didity; gray!	sh color; 5-	11ay 130D = 60	opm; oil	nd grease =	38.8 ppm; AJ	Marked turbidity; grayibh color; 5-hay MOD = 662 ppm; oil and grease = 35.8 ppm; Alkalinity (Ca.O3) = 606 ppm	1909 = (800	mc		
1000	14-8-64 0.47	5.7.	240					50.0	11.0	†	LBDPH
Very turbic		blor; 5-day	30D = 282 pp	n; Oil and	color; 5-day 80D = 282 ppm; Oil and grease = 23 ppm	md.					
5-6-64 1425	5-6-64 0.51 1425 12.5	4.7	7.11			93	09		0.3	\$	DWR
7	to to to	ati de , mari	TORO HOO ISO								

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

	Temp		Specific conduct-	25	Mineral co	constituents	. <u>e</u>	pod	parts per equivalents percent re	millior per tactance	million			Mineral parts p	constituent per million	constituents in	
DATE SAMPLED	when sompled in °F	H	ance (micro- mhos at 25°C)	Calcium	Magne- sium Mg	Sodies	Potas- sium K	Carbon- ate CO ₃	Bicar - bonate HCO ₃	Sulfate SO ₄	Chio- ride	Ni - trate NO ₃	Fluo- ride F	Boron	Sili- co SiO ₂	TDS Evap180°C Evap105°C Computed	Total hardness caco ₃
Stream name and station numb AT PACIFIC COAST HIGHWAY	stotion ST HIGH	number IWAY			3	LOS ANGELES		RIVER			48						
10- 2-63	73	1	-	200	213 17•52	3000 130.44	1	0	244	500	4960 139.87 91	0 0	1	1	1	9580	1376
11-13-63	99	1	1	254 12.67	250 250 20 10	4000 173.92 84	1	0	290	496 10.33	7035 198•39	0.9	1	1	-	12866	1663
12- 4-63	59	t t		340 16.97	650 53.46	7300 317•40 82		0	3.72	1557 32.42 8	12681 357.60 91	0	-	1	1	25638	3524
1- 8-64	57	8 • 0	1	285 14•22 6	2.06	4750	1	0	314 5 15	535	8377	2.4	1	1	4 8	13486	815
2- 5-64	62	7.5	1	350	6.99	5600 243.49 91	1	0	419 6 • 87	3.96	8500 239.70 96	0.01	1	1	1	15440	1224
3- 4-64	78	Î	1	590 29.44 6	285	10000		0	606	09.0	17164 484.02 98	0.01	1	1	-	29390	2646
49-8-4	69	7.5	1	452	230	5600	1	1	1	136	14342	0 • 0	-	0	405	20232	2075
79-9-9	82	7.4	41824	619 30•89 6	342 28•13	10500 456.54 88	88	0	919	0	18100	2.5	2 • 0	40.00	0 4	31450	2953

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES

Analyzed	by b		Пврвн	ГВОРИ	ГВрРИ	DWR
Dissolved oxygen	Percent		0	O Obbu	0	1.7
Dissolved	Ports per million		0.00 mdq 988 =	0.0	0.0	٠, ١
	Phenol		ty (caco ₃)	0.60 n; Alkalinit). \\	
r million	Turbidity	48	pm; Alkalin	asse = 57 pp	a	
Constituents, in parts per million	NH4		rease = 78	oil and in	sase = 18 pp	5
Constituents	Syndels	RIVER	om; oil and	116 ppm	7.2 70.0 spick on surface; 5-day HDD = 262 ppm; oil and @dease = 18 pp	
	PO4	LOS ANGELES RIVER	190D = 1,42 E	dor; '>-day B	OD = 262 ppm	a1/gae
Coliforma	MPN/ml		-40,45 odor; 5-day	0.6	70.0 ace; 5-day B	62 24-00 atin, green
:	Field pH	number	7.2	7.6	7.2 Lick on surf	8.0 toks and flo
Gage ht.(ft)	Flow (cfs)	Stream name and station number at PACIFIC COAST HIGHWAY	6-3-64 0.54 7.20.45 0.00 11.1 11.1 11.1 11.1 11.2 11.2 12.1 12.1 12.1 13.1 14.2 15.1 15.1 15.1 15.1 15.1 15.1 15.1 15	7-1-64 0.55 7.6 0.6 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	4.1 idity; oil s	9-14-64 0.58 8.0 62 1220 Yellowish color; oil slicks and floatin, green alge
Date	Remarks	Stream name	6-3-64 1020 ileavy turbi	7-1-64 1010 Marked turb	8-5-64 1020 4.1 Marked turbidity; oil	9-14-64 1220 Yellowish o

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

	Total hardness CaCO ₃		2686	2760	1851	934	
tuents in	Evap105°C Computed		31167	32046	16267	8425	
er mi	Stl co S:02		i i	1	1	26	
Mineral constituents parts per million	Boron		1	1	1	04.6	
	Fluo-		ţ I	1	1	1.0	
	NI - trate NO ₃		2.0	0.9	0.04	16	
million per million tance value	Chlo- ride	8 4	17610	17215	8155	4245 119•71 91	
0	Sulfate SO ₄		ł	0.35	7.50	265	
ports per equivalents percent re	Bicar - bonate HCO ₃		589	620	510	402	
por ts equivo	carbon- ate CO ₃	RIVER	0	0	0	0	
Ë	Potas- sium K		3 2	1	1	0.84	
constituents	Sodium	LOS ANGELES	11200	10500	5600	2544 110.61 85	
Mineral co	Magne- sium Mg	٦	245	300 24.67	235	91 7.48 6	
×	Calcium		53.53	611 30.49 6	354	224 11.18	
Specific conduct-	(micro- mhos at 25°C)		1	1		13245	
0, 0	Hd	number	7.2	7.6	l	7.6	
Temp	sompled In o F		80	89	08	7.9	
	DATE SAMPLED	Stream name and station numb at Pacific Coast Highway	79-2-9	7- 1-64	8- 5-64	79-11-6	

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES LOS ANGELES DRAINAGE PROVINCE (U) TABLE D-2

Anolyzed	by b			DWR	DWR	DWR	DWR	DWR	DWR	DWR	DWR
oxygen	Percent			111	94	98	100	t 1	9.6	89	ま
Dissolved	Parts per million			4.6	4.7	4.6	10.6	1	10.2	4.6	10.0
	Phenoi										
r million	Turbidity	67		A 255	Å 25	7 25	4 25	140	4 25	№ 25	A 25
Constituents, in ports per million	NH4										
Constituents	Syndets										
	P04	RIO HONDO									
Coliforma	MPN/ml			623	7000 620 red	4.5 6 water	0.60 0.60 water	 ery high flow	09:0	6.2 6.2 water	m a.
1	Hd Die L	number		<i>℃</i> .	7.8 70c 62 nsects observed	8.1 lorado River	8.0 Lorado River	ce of past wery high	7.7	7.8 Morado River	O. «
Gage ht.(ft)	Flow (cfs)	Stream name and station number	NARROWS	3.6	1.74 1.0 fish and i	12-4-63 1255 Clear; mosthy M.W.D. Col			2.84	ິວ	3.51
Date	Remarks	Stream name	AT WHITTIER NARROWS	10-3-63 0800 Clear	11-8-63 0830 Clear; small	12-4-63 1255 Clear; most	1-3-64 3.02 1100 149 Clear; mostly M.W.D. Co	1-22-64 2.51 1130 40 Slightly turbid; evider	2-10-64 1045 Clear	3-5-64 1530 Clear; most	4-4-64 Oll5 Clear

TABLE D-2 MINERAL ANALYSES OF SURFACE WATER

Total hardness caco ₃		163	1 1	315	222	3,	· · ·		7 3 ¢
TDS Evap1059C Computed			0 7 0	69 9	269	215	740	710	700
S+11- ca S+02		1	90	~	23	1	0 1	1.7	14
Boron		0.32	• 0	0.12	0.14	0.12	0.14	0.12	0 1 8
Fluor		1	1 • 1	0.0	9.0	0	9.0	0	7.0
Ni – trate NO ₃		1	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1.5	1.5	7 • 4 0 • 12	2.5	0 • 0 • 0	0 0 0
Chlo- ride Cl	64	84	2 4 4 5 7 3 8 5 7 3 8 5 7 3 8 5 7 3 8 5 7 3 8 5 7 3 8 5 7 3 8 7 5 7 5 8 7 5 7 5 8 7 5 7 5	2.54	2.45	23	2°41.	2000	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Sulfate SO ₄		196	201	283 5.89 52	289	38	276 5.75 53	201.00	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Bicar - bonote HCO ₃		238	3.67	146 2 39 21	134 2.20	1.16	161 2.64 24	163	166
Carbon- ate CO ₃		1	0	12 0.40	14 0 • 47	0	С	0	0
Potas- sium K	0	1	0.28	0.13	0.13	0 • 2 0	0.13	0 1 0 1 0	0.13
Sodium	IO HOND	106	4.04	108	105	17 0 74 26	103	96.	4 • 26 38 8
Magne- sium Mg	α.	1	1.97	2.38	31 2.55	0.066	22 1.81	30 2-47	2.30
Colcium		1	4.04	3.59	3.99	25	000 4.49 41	4.34	77
0		1031	985	1043	1032	304	1017	1020	1015
Hd	umber	7 - 7	7.4	8 3	30 60	7.5	° 00	۵ • يا	œ •
sompled in o F	c	76	65	35	95	j.	5	9,	r,
DATE SAMPLED	WHITTIER NAR	10- 3-63	11-8-63	12- 4-63	1-12-64	1-22-64	7-1-54	3- 5-64	4-64
	w held in pH (mircol minos) Colcium Magnes Sodium Potas Carbon Bicar Sulfate Chio Min Filus Boron Silin Frage most at 25°C) Co Mg No K CO3 HCO3 SO4 Ci NO3 F B Silo EvapingsC	sampled minos minos at 25°C) co Mg No RIO HONDO At 310 HO	pH (micro- Colcium Magne- Sadium Potas- Corbon- Bicar- Sulfate Chio- Ni- Fiuo- Boron Silinambos	pH (micro- colcium Magne- Sadium Potras- Corbon- Bicar- Sulfate Chio- Ni- Fiuo- Boron Sill- mhos sium No K CO ₃ HCO ₃ SO ₄ Cl No F B Sill- Sill- number RIO HONDO	The color The	Total Colcium Magne- Sadium Poinst- Corbon- Bicar- Sulfate Chie- Ni- Fiuo- Boron Sill- Mos Sadium Sill- Sulfate Sulfate Chie- Ni- Fiuo- Boron Sulfate Sulfate	The column Magne Sodium Poins Corbon Bicar Suffice Chio Mi Fluor Boron Sum Min M	Time Colicium Magne Sodium Foliate Corrigon Bicar Sulfate Chilo Ni Filus Gos Gos	Phi (micro- coletum Magne- sodium Points Corbon- Bicar- Sulfate Chilo- Ni- Filuo- Boron Sulfate Chilo- Ni- Filuo- Boron Sulfate Coletum Nogne- Sodium Sulfate Sodium Sodium

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES

Date	Gage ht.(ft)	3	Coliforma		Constituent	Constituents, in parts per million	er million		Dissolved oxygen	oxygen	Analyzed
Remarks	Flow (cfs)	Hd 01014	MPN/ml	PO4	Synders	NH4	Turbidity	Phenol	Parts per	Percent	by b
Stream nam	Stream name and station	number		RIO HONDO			149				
AT WHITTIER NARROWS	NARROWS										
·-6.64	1.39		. 2	÷.	0.16		**************************************		3,61	165	DWR
(= ,-t,1, 1305 Clear; low	1.5.1 1305 1.6 Clear; low tlow; many t	i.i.	3 3				Ž			J.	DWR
7-1 -04 1.6.	9 - 5 - 5 - 6 - 6 - 6 - 6 - 6 - 6 - 6 - 6	***	62	- -			, v		ê	3	10%.18
8-5-64 L430	1.75	1.7	£00.5				ı			i	DWIA
9-14-64 1050	Dry - no f	Acc									

TABLE D-2 MINERAL ANALYSES OF SURFACE WATER

	Total hordness CaCO ₃			વ			5.	
ë				26.2	15%	371	6,	
	Evapl80% hordness Evapl05% 03 Computed CaCO3			57.	822	851	275	
er m	S:11- co S:02			1 /	2	3.	1.2	!
Mineral constituents parts per million	Boron			0.31	0.37	0 + 0	0 38	1
	Fluor			1.0	1 • 1	1 • 3	1 • 3	1
	rate NO3			2.2	5.6	2 0 • 0 3	2.5	1
million per million tance value	Chlo- ride Cl	7.7		76 2.20 2.3	3.25	3.50	2.96	1
00	Sulfate SO ₄			3.69	278	299	246 5.12	1
parts per equivalents percent re	Bicar - bonate HCO ₃			216 3.54	3.65	243 3•98 29	168 2•75 23	1
par ts equiva percen	Carbon- ate CO ₃			0	0	٥	29 0.97 8	1
c.	Potas -	0		0.18	0.23	10	0.28	
nstituents	Sodium	RIO HONDO		40.04	121	139	120	1
Mineral constituents	Magne- sium Mg	X		22 1•81 19	2.38	2 - 3 8 17	2.55	1
Σ.	Calcium			3.54	96	5.04	3.89	1
Specific conduct-	- 0			110	1193	1277	1105	1
	Hd	number		© • €	7 • 4	7.3		1
Temp			ROWS	e s	7.5	55	9	1
	DAIE SAMPLEU	Stream name and station	AT WHITTIER NARROWS	79-9 -5	79-7-9	7-13-64	4-5-64	1

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES TABLE D-2

3
PROVINCE
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LES
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0.5

Date	Gago ht.(ft)		Coliform		Constituent	Constituents, in parts per million	oer million		Dissolved oxygen	oxygen	Anolyzed
Remarks	Flow (cfs)	Hd bloss	MPN/m1	P04	Syndets	NH4	Turbidity	Phenol	Parts per million	Percent	by b
Stream nam	Stream name and station number	number		MISSION CREEK	EK		V61				
AT WHITTH	AT WHITTIER NARROWS										
10-3-63	hry - 1. 3	FILM									DWR
11-8-63	Dry - 1. 3	» =									DWR
12-4-63	Dry - 155 1	W [.]									DWK
1-13-64 1025 Clear; Fin	1-13-64 5.66 1025 0.55 Clear; First Flow sing	7.7 . 6-5-62	÷.				₹		10.01	, g	DWR
5-10-134	Dry - t.o. t	ti w									DWR
5-5-64 1525	Dr.3 - 110- 1	1.1 .w									DWR
4-7,-64	Dry - mo	U w									DWR
9-0-04 1110	Dry - n - 1	ri w									DWR
6-3-64	Dry - no f	"Jow									DWI
7-13-64	ou - kad	,10w									DWk
6-5-64	Dry - no	No.									DWIs
7-14-64 1040	Dry - no	7. 9W									DWIR

MINI HAL ANALYTES OF SURFACE WATER

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

sampled pH (micro- colcium mhos) co	Stream name and station number AT WHITTIER NARROWS	1	1	1	47 7.5 1623	1	1 1	1	1
(micro- mhos at 25°C)	number				1623				
		t 1	1	}		1	1	1	
Colcium					print				
		!	-	1	208	1	-	1	1
Magne- sium Mg	Σ	1	<u> </u>	1	46 3.78 19	-			
Sodium	115510N		1	1	5.09	1			-
Potos-	CREEK	1	1	t 1	0.18	i I	-	1	1
		1	Ī	t I	0	Į Į	1	1	1
Bicar bonate HCO ₃			1	l t	356	1	1	1	1
Sulfate SO ₄		1	1	1	535 11.14	t I	1	1	1
Chlo- ride Cl	49A	1	1	1	88 2.48 13	1	1	1	!
frate NO3		1	l t	-	1.5	il t	1	-	1
Fluor		1	1	4	9.0	1	1	1	1
Boron		1	1	ţ	0.46	1	1	1	1
Sili- co Ev SiO ₂ Co		1	1	i I	20	1	1	1	-
op1809C h									
	Magne- Sodium Potos- Carbon- Bicar- Sulfate Chio- Ni- Fruc- Boron Sili- sium ofe bonate ride trate ride co Mg No K CO ₃ HCO ₃ SO ₄ CI NO ₃ F B SiO ₂	Magne- Sodium Potos- Corbon- Bicar- Sulfate Chlo- Ni- Flue- Boron Bium of Co ₃ HCO ₃ SO ₄ C1 NO ₅ F B	Magna- Sodium Potos- Carbon- Bicar - Sulfate Chio- Inde Trate Ni - Fluc- Boron Solar Sodium Solar - Solar	Magna- Sodium Potos- Carbon- Bicar - Sulfate Chio- Trate ride Ni - Trate ride Fluo- Boron Solar Soda Mg Na K CO3 HCO3 SO4 CI NO5 F B Solar S	Magna- Sodium Potos- Carbon Bicar- Sulfate Chio- Ni- Fluc- Boron Sil- Sium No g	Nogne- Sodium Potos- Carbon- Bicar- Sulfate Chilo- Ni- Fluc- Boron Sulfate Sodium Sodium	Mission Creek Mission Rodium Potos Carbon Bicar Sulfate Chlo- Ni- Fluc- Boron Sulfate Collar No. Co. Co. Co. Co. Co. Co. Co. Co. Co. C	Magna- Sodium Potos- Carbon Bicar- Sulfate Chlo- Ni- Fluc- Boron Sil- Sium No	Mogne- Sodium Potos- Carbon- Bicar- Sulfate Chio- Mi- Flug- Boson Sill- Mogne And Assum of Bicar- Sulfate Chio- Mi- Flug- Boson Sill- Mogne And Assum of Bicar- Sulfate Chio- Mi- Flug- Boson Sill- Mogne And Assum Of Assu

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CMEMICAL ANALYSES LOS ANGELES DRAINAGE PROVINCE (U) TABLE D-2

Anolyzed	by b			DWR	DWR		DWR	DWR	DWR	DWR	DATR
oxygen	Percent			68	47		66	105	91	92	144
Dissolved oxygen	Ports per million			8.0	7.6		10.0	11.2	9.5	8.6	14.41
	Phenol										
er million	Turbidity	Turbidity 149B		25	25		∧ 25	A 255	A 25	№	A CO
Constituents, in parts per million	NH4 Turbidity										
Constituents	Syndets			1.4	1.3		90.0	0.22	ter	0.10	1.70
	P04	RIO HONDO		13	17	1.75	0.144	2.5	silt throughout water	0.42	18
Collform	MPN/ml			620 50	620	23	2.3 40.45	23 6.2	23 21 n and silt t	130 130 water	230 230
71.7	E D	number		8.0	C.2	7.8	8.0	7.5 mud in chann	7.6 23 21 of vegetation and	8.0 Setation in	O. a.
Gage ht.(ft)	Flow (cfs)	Stream name and station number	ABOVE SPREADING GROUNDS	l est.	0800 5 est. 5 est.	 120 est. buried in mud	90 est.			0135 200 est. Clear; some foam and vegetation in	60 est.
Date	Remarks	Stream name	ABOVE SPREAD	10-3-63 0845 Clear	11-8-65 0900 Clear; veget	12-4-63 1:15 Clear; gage buried in	1-13-64 1133 Clear	2-10-64 1005 38 est. Clear; detergent odor;	3-5-64 1600 95 est. Clear; small particles	4-4-65 0135 Clear; some	5-6-64 1150 60 es Clear; some foam

TABLE D-2

OF SURFACE WATER	DRAINAGE PROVINCE (U)
ANALYSES	S
MINERAL	LOS ANGEL

	Temp		Specific conduct-	2	Mineral co	constituents	Ë	ports equivo	le n	millio per sactance	million			Mineral parts p	constituents per million	luents in	
DATE SAMPLED	sampled in oF	Hď	once (micro- mhos at 25°C)	Colcium	Magne- sium Mg	Sodium	Potas -	Carbon- ate CO3	Bicar - bonote HCO ₃	Sulfate SO ₄	Chlo- ride Cl	rate NO3	Fluo-	Boron	S.11 co S.02	TDS Total Evap1809C hardness Evap1059C CaCO3	Total hardness CaCO ₃
Stream name and station	station	number			02	OGNOH OTA	0				498						
ABOVE SPREADING GROUNDS	G GROUN	105															
	70	8.0	1164	71	23	141	-	0	260	156	132	36	1.2	24.0	32	702	272
10- 3-63				3.54	1.89	6.13	0.33		4.26	3.25	3.72	0.58				733	
	58	6.9	887	64	16	103	_	0	200	105	88	19	1.4	77.0	25	510	189
11- 8-63				2.45	1.32	4.48	0.33		3.28	2.19	2.48	0.31				518	
	89	7.7	1042	71	32	106	9	0	156	271	88	7.5	1.0	0.14	14	680	309
12- 4-63				3.54	2.63	4.61	0.15		2.56	5.64	2.48	0.12				673	
	09	8 • 3	1030	80	30	105	200	14	134	284	86	2.0	9.0	0.14	12	680	323
1-13-64				36	22	4.07	0.13	4	200	2.41	22	0				689	
77-01-6	55	7.5	1010	76	2.30	105	9 5 5	0	163	263	87	7.5	9.0	0.16	13	069	305
40-01-2				35	21	42			52	51	23	1				999	
	09	7 . 8	1024	80	c	103	2	0	159	286	06	3.0	9.0	0.12	12	720	331
3- 5-64				3.99	2.63	7.00	0.13		2.61	53	2.54	0.00				069	
	55	8.0	1011	96	24	86		0	161	286	87	3.0	9.0	0.18	14	700	338
79-7-7				4.79	1.97	38	0.13		2.64	54	22	0.00				663	
	9	7.4	1019	45	21	129	12	0	232	119	108	07	1.6	0.62	27	659	199
5- 6-64				2.25	1.73	5.61	0.31		380	2.48	3.05	0.65				617	

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CMEMICAL ANALYSES

LOS ANGELES DRAINAGE PROVINCE (U)

Appload	by b			DWR	DWR	DWR	DWR
oxygen	Percent			8	68	45	77
Dissolved oxygen	Parts per			7.2	0.00	3.8	†. 9
	Phenol						
r million	Turbidity	4 2 5 5 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8				05	
Constituents, in parts per million	A H N						
Constituent	Syndets			0.19	6.0		
	PO4	RIO HONDO		2.5	29	marine life	
Coliforma	MPN/ml	14		62 130 insect larva	240	700 240 odor; much	240
	He bieid	number		8.0 arine life;	7.6	8.2 700 240 crong sewage odor; much	₹. 8
Gage ht.(ft)	Flow (cfs)	Stream name and station number	ABOVE SPREADING GROUNDS	6-3-64 1240 lest. Clear; low flow; much ma	8 est.		0.25 est.
Date	Time	Stream name	ABOVE SPREA	6-3-64 1240 Clear; low	7-13-64 8 es 0940 8 es Clear; some foam	8-5-64 1450 Ponded Yellowish tinge; very s	9-14-64 1100 Yellow color; foam

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TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

	Temp		Specific conduct-	2	Mineral co	constituents	ë	por ts equivo	ports per equivalents percent re	ports per million equivalents per million percent reactance value	million			Mineral constituents parts per million	consti	fuents in	
DATE SAMPLED	when sompled in °F	Hd	micro- mhos at 25°C)	Colcium	Mogne-	Sodium	Potos	Carbon- ate CO3	Bicar - bonate HCO ₃	Sulfate SO ₄	Chlo- ride	hi- trate NO3	Fluo-	Boron	Sili-	Evapl80°C hardness Evapl05°C Computed	Total hardness os CaCO3
Stream name and station		number			α	RIO HONDO	C				407						
ABOVE SPREADING GROUNDS	GROUN	DS									1						
6- 3-64	80	7.8	1005	85	2.14	100	6 0 15	0	204	238	87	2.5	1.0	0.27	15	688	319
				39	20	40	7		31	94	23					099	
7-13-64	70	7.2	991	2.25	25	116	14	0	227	151	92	10	1.7	24.0	31	638	216
*0-01-2				23	21	52	4		39	3 5	75	2 2				598	
	76	7.5	1617	110	36	190	19	0	339	310	182	1.8	1.2	0.52	31	1134	423
8- 5-64				5.49	2.96	8.26	0.49		5.56	6.45	5.13	0.03				1048	
	78	8 .5	1378	107	28	151	11		193	302	145	21	0 • 8	0.28	27	930	382
9-14-64				5.34	2.30	6.57	0.28	_	3.16	6.59	60.7	0.34					
				37	16	45	2	2	22	43	28	2				912	

MINERAL ANALYSES OF SURFACE WATER

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES LOS ANGELES DRAINAGE PROVINCE (11) TABLE D-2

Analyzed				DWR		DWR	DWR	DWR	DWR	DWR	DWR
oxygen	Percent					103	107				82
Dissolved oxygen	Parts per million					9.6	9.11				-
	Phenol										
r million	Turbidity	50				A 225	25.				52
Constituents, in parts per million	NH4										
Constituent	Syndets	IVER				0.12					
	P04	SAN GABRIEL RIVER				45.0					
Coliforma	MPN/ml	co.				240	39				240 240
100		number		flow	flow	8.2 River water	8.0 River water	Mon	mon ti	flow	۵. د
Gage ht.(ft)	Flow (cfs)	Stream name and station number	R NARROWS	Dry - no 1	Dry - no f	12-4-63 1345 Clear; mostly Colorado	1-13-64 0950 Clear; mostly Colorado	Dry - no f	Dry - no f	Dry - no f	151
Dote	Remarks	Stream name	AT WHITTHER NARROWS	10-3-63	11-8-63	12-4-63 1345 Clear; most	1-13-64 0950 Clear; most	2-10-64	3-5-64	4-4-4	5-6-64 1055 Clear

TABLE D-2

ANALYSES OF SURFACE WATER	DRAINAGE PROVINCE (U)
MINERAL ANAL	LOS ANGELES

	Totat hardness CaCO3				r~	5.2				7.
tuents in	Evapl800c hardness Evapl050c CaCO3				585	\$\frac{1}{2} \frac{1}{2} \frac				730
consti	S.11 ca S.02		i i	1	2		l l	į.	I I	1
Mineral constituents parts per million	Boron		1	1	0.10	0.14	1	1		• 0
	Fluo-		1	1	9.0	9.0	1	1	1	9
	N trate NO ₃		1	-	2.0	2.0	1	1	1	0 • 0 .
nillion	Chlo- ride Ci	50	1		89 2.51 22	2.45	1	1		2 · 4 · 0 · 5 · 5 · 5 · 5 · 5 · 5 · 5 · 5 · 5
parts per million equivalents per million percent reactance value	Sulfate SO4		-	-	283	287			-	284 5.91 54
parts per equivalents percent re	Bicar - bonate HCO ₃		ł		154 2 52	122 2.00 2 18	-	1	1	2.67
parts equiva percen	Carbon- ate CO ₃	RIVER	1	1	0.33	19	-	1	1	0
ë	Potas- sium K		-	1	0.13	0.13	1	1	1	0.13
Mineral constituents	Sodium	SAN GABRIEL	-	i i	105	105	!	1	8 9	4 • 2 6 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8
	Magne- stum Mg	v	-	t I	3.04	30	1	1	1	2.3.
×	Colcium		1	l l	3.29	4.90.00			1	4.24
Specific conduct-	micro- mhos at 25°C)			1	1056	1034			1	1012
0,	Ha	number		1	φ •	χ 4	1	1	-	ο φ
Temp	when sampled In o F	1 -	1	1	ъ 0	3.4	1	1	1	9
	DATE SAMPLED	Stream name and station AT WHITTIER NARROWS	, 49 1 c	11- 3- 3- 3- 3- 3- 3- 3- 3- 3- 3- 3- 3- 3-	121	1-1 64	2-1, -64	3- 5-64	1 0 1	·, - 6 - 6.44

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES TABLE D-2

Analyzed	by b		DWR	DWIK	DWR	DWR
oxygen	Percent					
Dissolved oxygen	Parts per million					
	Phenol					
r million	Turbidity	50				
Constituents, in parts per million	NH4					
Constituen	Syndets	RIVER				
	P04	SAN CABRIEL RIVER				
Coliforma	MPN/ml					
1		number	flow	flow	flow	flow
Gage ht.(ft)	Flow (cfs)	Stream name and station number AT WHITTER WARROWS	Dry - no	Dry - no	Dry - no	Dry - no
Date	Remarks	AT WHITTIER NARROWS	6-3-64	7-13-64	8-5-64	9-14-64

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

	Temp		Specific conduct-	2	ineral co	Mineral constituents	. <u>e</u>	por	parts per equivalents percent re	millio per eactance	million		2	Mineral constituents parts per million	consti	fuents in	
DATE SAMPLED	when sampled in °F	Hď	ance (micro- mhos at 25°C)	Calcium	Magne- stum Mg	Sodium	Potas- sium K	Carbon- ofe CO ₃	Bicar - bonote HCO ₃	Sulfate SO ₄	Chlo- ride	rote NO3	Fluor	Boron	Sili-	Evapl80°C hardness Evapl05°C caCO ₃	Total hardness 03 CaCO ₃
Stream name and station	1 -	number			۰.	SAN GABRIEL RIVER	IEL RI	VE R			50						
AT WHITTIER NARROWS	ROMS																
79-8-9	I t	ă I	-	1	1		-	1		1	-	!	1	3 1	1		
7-13-64	Į.	1	1	1	1	1	1	1	1	1	ŧ t	1 1	8	1	1		
49-C - P	1	-	1	1	1	1	-	1	1	ţ		† 1	1	1	Į Į		
3-14-64	1	1	1	1		1	-	1	1	1	1	1	1	1	ł		

MINERAL ANALYSES OF SURFACE WATER FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES LOS ANGELES DRAINAGE PROVINCE (U) TABLE D-2

	Analyzed by b			DWR	DWR	DWR	DWR	DWR	DWR	DWR	DWR
OKYGED	Percent			100	103	98	103	48	78	711	100
Dissolved oxygen	Ports per million			0.6	10.4	4.6	12.0	8.0	80.	11.8	10.4
	Phenol										
million	Turbidity	50D		A 25	55	A 25	A 25	∆ 25	₹ 25	50	A 22.
Constituents to parts per million	NH4										
Constituent	Syndets	RIVER		90.0		0.02					
	PO4	SAN GABRIEL RIVER		0.0		90.0					
6	MPN/mi			9.0	∧ 0.45 ∧ 0.45	0.6 2.3 ghout water	9.0	0.6	< 0.45 < 0.45 < 0.45	0.6	9.00
	Field pH	number		8.0	8.3 runoff	7.8 0.6 2.3 etation throughout water	0.80	7.8	7.8	8.0	7.6
	Gage ht.(ft) Flow (cfs)	Streem name and station number	WERHOUSE	ded	80 from storm	12-4-63 1005 Small particles of vege	10	37	37	80 high flow	: 8
Date	Time	Streem nome	AT AZUSA FOWERHOUSE	10-3-63 1145 80 Slightly tarbid; some	11-7-63 1410 Very turbio	12-4-63 1005 Small part:	1-13-64 1235 Clear	2-10-64 1135 Clear	3-5-64 1330 Clear	4-4-64 0405 80 Milky hue; high flow	5-6-64 1010 Clear

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MINERAL ANALYSES OF SURFACE WATER	LOS ANGELES DRAINAGE PROVINCE (U)
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	Total hordness CaCO ₃		200	223	211	211	200	211	180	175
constituents in	Evapl809c hordness Evapl059c CaCO3			270	270	245	270	240	225	250
constituent per million	Sili- co SiO ₂		1	19	22	16	7,4	16	19	12
Mineral parts p	Boron		0.11	0.12	0.10	0.12	0 0 8	0.10	0 • 30	0.10
	Fluo- ride		ł	7.0	0 • 4	0 • 5	0 . 5	0 • 5	7.0	0
	Ni - trote NO ₃		1	1.5	2.0	0.0	2.5	1.5	2.5	0 • 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
million per million tance value	Chio- ride Ci	50D	6	0.20	0.17	0.14	0.17	0.14	0.14	0 0 0 8
200	Sulfate SO ₄		1	26 0 . 54	28 0.58	30.62	0.65	0.631	0.50	0.58
ports per equivalents percent r	Bicar - bonote HCO ₃		237	278	256	239	244	254	215 3 • 52 84	210
por	Carbon- ofe CO ₃	RIVER	0	0	0	12 0.40	0	0	0	0
ü	Potas		1	0.13	0.10	0.10	0.10	0.10	3 0.08	0 0 8 8 9
constituents	En: pos	SAN GABRIEL	14	14 0.61	14 0.61	18 0.78	15 0 65 14	13 0.57	0.48	0.39
Mineral co	Mogne- sum Mg	Š	1	1.32	1.48	1.23	1.43	1.32	1.15	1.15
W	Colcium		1	3.14	55 2 74 56	2.99	2.52	58 2 • 89 59	2.49	2.35
Specific conduct-	mhos at 25°C)		064	954	6443	4443	412	418	366	365
0, 0	Hd	number	0 • 6	0.8	7 . 8	& .	0	0 .	0 • 8	
Temp	sampled In °F	-	7.0	9	6	8 7	8 4	5	5 5	5.5
	DATE SAMPLED	Stream name and station AT AZUSA POWERHOUSE	10- 3-63	11- 7-63	12- 4-63	1-13-64	2-10-64	3- 5-64	79-7 -7	9-9-9-

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CMEMICAL ANALYSES

Anolyzed	by b			DWR	DWR	DWR	DWR
oxygen	Percent			107	68	93	83
Dissolved oxygen	Parts per million			0.11	0.0	9.4	ω _.
	Phenoi						
r million	Turbidity	20D		A 25	A 25	!	A
Constituents, in parts per million	NH4						
Constituent	Syndets	IVER		0.02	90.0		
	P04	SAN GABRIEL RIVER		0.0	0.0		
Coliforma	MPN/ml	78		0.6	2.3	6.3	13.45
200		number		7.6	7.4	7.6	.78
Gage ht.(ft)	Flow (cfs)	Stream name and station number	VERHOUSE	60 est. Le foam	 60 e foam	18	19
Date	Remarks	Stream name	AT AZUSA POWERHOUSE	6-3-64 60 est 1115 Clear; little foam	7-13-64 60 1000 Clear; little foam	8-5-64 1325 Clear	9-14-64 0945 Clear

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TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

	Temp		Specific conduct-	2	Mineral constituents	instituents	.c	ports equiva percen	ports per equivalents percent re	millior	million			Mineral constituents parts per million	const	ituents in	
DATE SAMPLED	sampled In o F	Ha	(micro- mhos at 25°C)	Colcium	Mogne- sium Mg	Sodius	Potos- Sium	Corbon- ote CO3	Brcar - bonate HCO ₃	Sulfate SO ₄	Chlo-	Ni - trate No ₃	Fluo-	Boron	Stl:- ca S:02	Evaple99 CaCO3	Total hardness CaCO ₃
Stream name and station	1	number															
AT AZUSA POWERHOUSE	HOUSE				S	SAN GABRIEL RIVER	IEL RIV	/ER			50D						
9-8-9	5 8	7.8	365	53 2.64	12 0 99 24	10	0.08	0	3.39	27 0.56	0.14	1.2	0.5	0.11	7	216	182
7-13-64	9	7 • 5	367	49 2.45 61	1.07	10	0.08	0	208 3•41 83	26 0.54	0.14	0.03	7.0	60.0	11	224	176
8- 5-64	68	© • •	376	51 2.54 63	12 0.99	10	0.10	0	211 3.46 84	0.52 0.52	0.14	1.5	0 . 5	0.12	0 10	229	177
9-14-64	72	7.9	374	2.35	1.15	10	0.10	0	3.38	28	0.11	2 0 • 0 3	7.0	0.09	11	223	175

TABLE D-2 MINERAL ANALYSES OF SURFACE WATER

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL AMALYSES TABLE D-2

Analyzed	by b			DWR	DWR	DWR	DWR	DWR	DWR	DWR	DWR
oxygen	Percent			126	63	108	17	1174	44	88	<u>ش</u>
Dissolved oxygen	Ports per million			17.14	6.2	12.0	1.8	12.0	8.7	9.0	9. a
	Phenol										
r million	Turbidity	61		V	Λ π./	25	A 23	۸ 5)	V V	V	ې V
Constituents, in parts per million	NH4										
Constituents	Syndets	~		00.0							
	POS	VENTURA RIVER		00							
Coliforma	MPM/ml				3.8	8 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	30	13	23 13 on bottom	623	.4 .910
		number		T.o	*	.: :	7.f in stream	observed	7.2 green algae		7.4.
Gaga ht.(ft)	Flow (cfs)	Stream name and station number	14.	c.£? o.1 getat: n m	6.0° 0.1 algae	2.1	6.25 0.2 vegetation	6.33 0.5 and insects	6.24 0.2 on surface;	1250 6.:5 0.8 Clear; small fish observed	5-5-64 C.:/ 1207 1. Clear; nick and insects
Dote	Remarks	Stream name	LEAN VELLURA	1)-2-65 0655 Scum and ve	11-1:-5; 1604 Clear; muck	1563 1910 Very clear	1-3-64 1400 Clear; much	2-5-64 1135 Clear; fish	3-4-64 1100 Clear; scur	4-:-64 1250 Clear; small	5-5-64 1207 Clear; rick

TABLE D-2 MINERAL ANALYSES OF SURFACE WATER

	Total hardness CaCO3		530	573	568	578	560	584	255	526
constituents in	Evap 180°C Computed			\$00	870	940	890	950	856	905
er mi	S:11-		}	30	31	23	10	20	5.2	1 6
Mineral constituent parts per million	Вогол		0 • 58	0.62	0.52		0.52	0.52	0.20	0.62
	Fluo-		j t	0.7	0.7	7 • 0	30	0.7	0.7	. 0
	rote NO3		1	0.01	0.10	0.6	2.9	2.5	2.0	1.0
million	Chlo- ride	61	1.80	2.12	1.97	1.97	1.97	73 2.06	71 2 000 14	1 . 89
per	Sulfate SO ₄		-	317	325	334	327	326	310	304
equivalents percent re	Bicar - bonate HCO ₃		356	381	354	368	356	378	359	334 5.47
equiva	Carbon- ate CO ₃		0	0	C	0	O	0	0	0
ċ	Po : 0 8 X	RIVER	1	0.05	0.08	0 ° 0 ° 0	0.08	0.00	0.08	0 • 0 5
nstituents	Sodium	VENTURA	3.13	3.61	3.30	3.39	3.48	3.39	3.26	3.00
Mineral constituents	Magne- srum Mg	>	t	3.37	3.62	3.37	3.37	3.70	3.54	3,37
M	Calcium		1	8.08	155	164 8 . 18	7-83	160	150	7.143
Specific	micro- mhos of 25°C)		1234	1242	1297	1282	1225	1253	1198	1159
0, 0	Hd	number	7 • 4	7 • 3	7.5	7 • 7	· ·	7 . 4	7 • 7	7 8
Temp	sompled in o F	s to tion n	0	62	(·	9 8	\$	2.6	5.3	88
	DATE SAMPLED	Stream name and s		11-14-63	6 - 6 - 6 - 6 - 6 - 6 - 6 - 6 - 6 - 6 -	1- 3-64	904	3-4-64	4-7-64	7 - 6 - 6

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES TABLE D-2

4	by b			DWR	DWR	DWR	DWR
oxygen	Percent			81	601	#6	156
Dissolved oxygen	Parts per million			7.6	4.6	6.0	12.2
	Phenol						
r million	Turbidity	61		% ▼	∆	}	v ⊗
Constituents, in parts per million	NHA						
Constituents	Syndets				d.		
	PO4	VENTURA KIVER		bserved	23 13 fish and insects observed.		ing dead fish
Coliforma	MPN/ml			23 small fish observed		.000	23 rface; float
7	Hd DIO	number		6-2-64 6.30 7.2 1225 0.1 Clear; algae on bottom and surface;	7.4 algae; small	0° J	7.3 23
Gage ht.(ft)	Flow (cfs)	Stream name and station number	V	6.30 0.1 e on bottom	7-2-64 6.18 7.4 1540 Fonded Slightly turbid; green algae; small	5.98 Ponded	
Date	Remarks	Stream name	MEAR VENTURA	6-2-64 1225 Clear; alga	7-2-64 1540 Slightly tu	8-4-64 1315 Clear	9-1-64 6.02 1510 Ponded Clear; green algae

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

	Total hardness CaCO ₃			564	533	544	57.2
fuents in	Evaple99 Cacos			934	898	796	0 4 6 8
er mi	Sili-			23	54	27	0
Mineral constituents parts per million	Boron			99•0	0.59	0.68	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
	Fluo-			80	0.7	1.00	Φ • •
	Ni - trate NO3			1.5	2 0 • 0 3	2.9	0.02
million	Chlo- ride Cl		61	74 2 - 09 14	78 2.20	2.45	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
millior per tactance	Sulfate SO ₄			300	302	306	6 3 4 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8
parts per equivalents percent re	Bicar - bonate HCO ₃			378	358	364 5.97	600 4 000 4
parts equivo percer	Carbon- ate CO3			0	0	0	0
e i	Potes -		RIVER	3 0 0 0 1	3 0.08	3 0.08	0 1 1 1 1
nstituents	En pos		VENTURA RIVER	3.35	3.57	3.74	2 4 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8
Mineral constituents	Magne- sium Mg		>	3.45	3.37	3.29	3,44,23,34,44,44,44,44,44,44,44,44,44,44,44,44
2	Colcium			157	146	152	7,98
Specific conduct-	micro- mhos at 25°C)			1234	1225	1268	1302
	I	number		7 • 3	7.6	7 • 7	9
Temp	when sompled in o F			99	74	73	72
	DATE SAMPLED	Stream name and station	NEAR VENTURA	6- 2-64	7- 2-64	8- 4-64	1-64
	DATE	Stream	NEAR V	-9	7	80	1 6

MINERAL ANALYSES OF SUMFACE WATER FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES TABLE D-2

LOS ANGELES DRAINAGE PROVINCE (U)

Analyzed				KWD	UMD.	MWD	T&D	130D	OWD.		MAID		
oxygen	Percent			ì	1	1	1	å t	1	1	1		
Dissolved	Parts per million			;	1 1	ž i	1 1	!	1	1	1		
	Phenol						0.8 Witrite = 0.001 ppm						
r million	Turbidity	69		9.0	0.7	ω· •	0.8 1; Etrite =	و د د	1.0	1.0	7.		
s, in parts per million	NH4			Tile Tile Tile Tile Tile Tile Tile Tile	u.	m) = 118 ppm;)IL.					
Constituents,	Syndets	S.R.		Alkalinity (CaCC ₅) = 109 ppm	mdd [[[= (502	303) = 114 ppm	Color = 6; Alkalinity (CaCb ₂) = 118	Alkalinity (CaCO ₃) = 12C ppm.					
	P04	COLORADO RIVER		salinity (Ca	Alkalinity (CaCO3) = 111	Alfalinity (CaCO ₃) = 114	or = 6; Alk	talinity (Ca					
Collforma	MPN/ml			1 ppm;	 l ppm; All	= 1 ppm; All	1 ppm;	= 1 ppm;	- 1 ppm	mdd t =	- - -		
	Field pH	number		e; Tree JOg	e; Tree CO2	e; free CO2	e; free CO ₂ =	e; free CO2	e; free CO2	e; free CO ₂	e; free CO ₂		
Gage ht.(ft)	Flow (cfs)	ond station	LA VERNE	10-1-63 Monthly composite same	11-1-63 Monthly composite sampl	composite samp	1-1-64 Konthly expensive samp.	 composite samp.	composite sampl	composite samp	5-1-64 Monthly composite sampl		
Date	Time	Stream name	AQUEDUCT AT LA VERNE	10-1-63 Monthly cor	11-1-63 Monthly con	12-1-63 Monthly com	1-1-64 Menthly co	2-1-64 Monthly co	3-1-64 Monthly cor	4-1-64 Monthly co	5-1-64 Monthly co		

MINERAL ANALYSES OF SURFACE WATER

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

	Temp		Specific conduct-	Σ	Mineral co	constituents	<u>.c</u>	por	parts per equivalents percent re	million per actance	million			Mineral parts p	consti	constituents in	
DATE SAMPLED	when sampled in oF	Н	once (micro- mhos at 25°C)	Colcium	Magner	Sodium	Potas- sium K	Carbon- ate CO3	Bicar - bonote HCO ₃	Sulfate SO ₄	Chlo- ride	rote NO3	Fluo- ride F	Boron	S:11-	TDS Evap180°C Evap105°C Computed	Total hardness caco ₃
Stream name and station	1	number			Ü	COLORADO RIVER	RIVER				69						
AQUEDUCT AT LA VERNE	VERNE											1					
10- 1-63	1	8 2	1050	3.99	2.38	96 4.17 39	0.13	0	133	288	85 2.40 23	0.01	7.0	1	6	660	319
11- 1-63	1	8 • 2	1035	81 4.04 38	2.30	95 4.13 39	0.13	0	135 2.21 21	290	2.37	0.0	0.0	1	10	661	317
12- 1-63	09	80	1035	81 4.04 38	2.38	94	0.13	0	139	286 5.95 56	2.31	0.01	7.0	}	6	656	321
1- 1-64	57	8 • 4	1045	4.19	2.30	96	0.13	0.03	142 2 3 3 2 2 2	287	2.45	1.1	0.4	0 • 11	\$	670	325
2- 1-64	55	8	1055	84 4•19 39	2.30	95 4.13	0.13	0.03	144 2 3 3 5 2 2 2 2 2	288	2.43 2.22	1.1	0 • 4	ł	20	670	325
3- 1-64	5	8 • 4	1050	84 4.19 39	2.30	95 4.13	0.13	0.03	145	288	84 2.37 22	1.0	7.0	1	5	668	325
4- 1-64	1	9 • 4	1040	4.24	2.30	94 4.09 38	0.13	0.03	145	283 5.89 55	2.37	1.4	7.0	i i	10	664	327
5- 1-64	1	80 •	1060	86 4.29 40	2.30	94 4.09 38	0.10	0.03	145	286 5.95 55	86 2•43 23	0.01	7.0	1	1	668	330

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES TABLE D-2

	Gage ht.(ft)	7	Coliforma		Constituent	Constituents, in parts per million	er million		Dissolved oxygen	oxygen	Anolyzed
Remarks Flov	Flow (cfs)	HQ 810	MPN/mi	P04	Syndets	NH4	Turbidity	Phenol	Parts per million	Percent	by b
Stream name and station		number	90	COLORADO RIVER	ER		69				
AQUEDUCT AT LA VERNE	ERNE										
6-1-64 Monthly composite sampl	c sample	 e; Color = 8	1				1.0		1	1	MWID
71-64 Monthly composite sample; free CO ₂ = 1 ppm	c sample	free CO2	 = 1 ppm				6.0		1	1	WD
8-1-64 Monthly composite sampl	e sample	e; free CO ₂ =	= 2 ppm				† · ₹		i	<u>{</u>	OME!
9-1-64 Monthly composite sampl	e sample	e; free CO ₂ = 1 ppm	1 ppm				1		1	1	CTMP1

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

	Total hardness as CaCO ₃			330		331	326	326	
luents in	Evap180°C hardness Evap105°C caco ₃			671	019	681	683	069	
constituents per million	Sili- ca SiO ₂			10		0 1	10	10	
Mineral constituent parts per million	Boron			0.11		1	t t	1	
	Fluo- ride			7.0		7.0	0 • 0	5.0	
	rote No3				70.0	1.0	0.6	0.0	
million	Chlo-		69	78	23	2.59	2 • 65 2 • 65	94 2.65 24	
milltor per sactonce	Sulfate SO ₄			287	5.5	292	294	300	
ports per equivalents percent re	Bicar bonate HCO3			143	22	2.29	135	134 2.20 20	
ports equivo percer	Carbon- ate CO3				0000	0	0	0	
c	Potos E Est		RIVER	70 (0.13	5 0 • 13	0.13	0.13	
constituents	En pox		COLORADO RIVER	76	38	4.22	100	101	
Mineral co	Magner Sium M		ŭ	28	2.30	2.38	2.38	2.38	
×	Colcium			86	04	4.24	83 4.14 38	83 4.14 38	
Specific conduct-	ance (micro- mhos at 25°C)			1070		1080	1090	1090	
	Ha	number		8 3		8 . 2	8 • 1	8 • 2	
Temp	when sompled in ^o F	٦.	FRNE	67		72	77	76	
	DATE SAMPLED	Stream name and station	AQUEDUCT AT LA VERNE	77-1	701	7- 1-64	8- 1-64	9- 1-64	
	DATE	Stream	AQUEDI	,	0	7-	8	6	

MINERAL ANALYSES OF SURFACE WATER FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES TABLE D-2

Street S	Field pH Coliform
0.01 7 8.6 90 = 0.49 ppm 0.01 7 9.6 91 0.41 ppm 0.032 ppm 6 12.2 99 0.25 ppm 0.01 11.6 97 0.25 ppm 0.28 ppm 4 9.6 8.6 90 11.5 99 11.6 97 0.28 ppm 4 9.6 8.6	MPN/mi PO4
0.01 7 8.6 90 0.01 7 9.6 91 0.01 7 9.6 91 0.00 99 0.32 ppm 0.00 99 0.25 ppm 0.01 11.6 98 0.22 ppm; arsenic = 0.40 ppm; arsenic = 0.005 ppm 0.01 11.6 98 0.28 ppm 4 9.6 86	LOS ANG
0.01 7 9.6 90 = 0.49 ppm 0.01 7 9.6 91 0.41 ppm 0.02 ppm 0.03 ppm 0.01 11.6 99 0.25 ppm 0.01 11.6 99 0.25 ppm 0.01 11.6 97 0.28 ppm 4 9.6 86	
0.01 7 9.6 91 0.41 ppm 0.00 9 0.32 ppm 0.01 11.6 99 0.25 ppm 0.01 11.6 97 0.28 ppm 4 9.6 91 11.5 99 0.02 ppm; arsenic = 0.40 ppm; arsenic = 0.005 ppm 0.01 11.6 97 0.28 ppm 4 9.6 86	9.5
7 9.6 91 6 11.5 99 6 12.2 99 7 11.6 99 11.6 97 11.6 97 11.6 97 10.0 93 4 9.6 86	nity = 119 ppm
9 11.5 99 6 12.2 99 anic nitrogen = 0.40 ppm, arsenic = 0.005 ppm 11.8 98 11.6 97 2 10.0 93 4	1
99 88 93 93 94 95 95 95 95 95 95 95 95 95 95 95 95 95	alkalinity = 115 ppm
99 98 93 96	1
96 98 93 93	5; alkalinity = 120 ppm
96 98 98	0.0
11.8 98 11.6 97 10.0 93 9.6 86	5 Day BOD = 1.1 ppm; color = 5; alkalinity = 128 ppm;
10.0 93	-
10.0 93	alkalinity = 110 ppm;
93 9.6 86	0.05
10.0 93	alkalinity = 116 ppm;
9.6	60.0
9.6	5 Day BOD = 1.3 ppm; color = 5; alkalinity = 115 ppm;
	1

MINEMAL ANALYSES OF SURFACE WATER

TABLE D-2

LYSES OF SURFACE WATER	DRAINAGE PROVINCE (U)
ANALYSES	LES
MINERAL	ANGELES
M	105

	Total hordness caco ₃		63	16	76	7.8	0	3	8.7	8 7
constituents in per million	Evapl809C hordness Evapl059C caC03					86				186
constituent per million	Sili- ca SiO ₂		27	20	20	2	10	18	20	21
Mineral parts p	Boron		0 33	0.38	0.45	1	0.45	14.0	77.0	1
	Fluo- ride		0.5	0 • 5	0.5	9.0	0.0	9	9 • 0	7 • 0
	hrate NO3		0.01	0.6	0.0	0.01	0.04	0.2	0.2	1.0 0.02 1
million	Chio- ride	7.0	12	13	13	15	17	20	16	0.48
er million ts per million reactance value	Sulfate SO4		21	20	30	29	24	17	28	21 0.44 15
t e p	Bicar - bonote HCO ₃		1	\$ 6	1	-	1	1	1	118 1.93 6.7
por 1s equiva percen	Carbon- ate CO ₃	JEDUCT	1	!	1	1	1	\$ 	l I	0
Ë	Potas-	LES AQ	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
constituents	Sodium	LOS ANGELES AQUEDUCT	1.17	1.22	1.39	30	1.43	32	35	1. 468
Mineral co	Magne- sium Mg	٦.	0.33	0.41	5	64.0	64.0	7 0.58	9 64.0	0.58
×	Calcium		21	1.10	1.10	1.25	1.16	1.10	1.25	1.153
Specific conduct-	ance (micro- mhos at 25°C)		281	299) i	329	306	306	332	334
	Hd	number	1	1	8 5	9 • 4	8 - 2	8 . 1	8 • 4	4
Temp	when sampled in °F	100	99	56	4 8	777	45	94	24	2
	DATE SAMPLED	Stream name and station NEAR SAN FERNANDO	10-22-63	11-19-63	12-17-63	1-21-64	2-25-64	3-17-64	4-21-64	5-19-64

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES TABLE D-2

Analyzed			LADWP	LADWP	LADWP	IADWP
oxygen	Percent		95	108	91	₩
Dissolved oxygen	Parts per million		& &	4.6	0.8	α. &
	Phenoi			maa 83.0	4	
r million	Turbidity	70	7	8.28 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	<u>ب</u>	ω
Constituents, in parts per million	NH4			. Kieldah	udd	0.00
Constituent	Syndets	AQUEDUCT		800	nic = 0.007	
	P04	LOS ANGELES AQUEDUCT		The same	25 ppm; Arse	
Coliforma	MPN/ml		1	1	8.40 0.0 8.40 color = 10; Alkalinity = 125 ppm; Arsenic = 0.007 ppm	;
7	Field pH	number	4.8	8.28	8.40 lor = 10; A	8.70 color = 15
Gage ht.(ft)	Flow (cfs)	Stream name and station number	1495.2			1,0 ppm;
Date	Time	Stream nam	6-16-64 1495.2	Color = 5 7-21-64	8-18-64 5 day BOD	9-22-64 5 day BOD

MINERAL ANALYSES OF SURACE WATER

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

	Temp		Specific conduct-	2	Mineral co	constituents	.5	por	parts per equivalents percent r	parts per million equivalents per million percent reactance value	million			Mineral constituent parts per million	consti	Mineral constituents in parts per million	
DATE SAMPLED	sampled in o F	Hd	ance (micro- mhos at 25°C)	Colcium	Magne	Sodius	Potas- sium K	Carbon- ate CO3	Bicar - bonate HCO ₃	Sulfate SO ₄	Chlo-	rote NO3	Fluo- ride	Boron	S:11:-	TOS Evap1809C Evap1059C Computed	Total hordness CaCO3
Stream name and station	1	number															
NEAR SAN FERNANDO	400				7	LOS ANGELES AQUEDUCT	LES AQI	JEDUCT			70						
6-16-64	64	8 5	351	1.25	64.0	37	4 0 • 10	1	-	26	15	0.0	9 • 0	1	22		87
7-21-64	73	80	341	1.30	67.0	35	0.10	1	-	26	14	0.2	9.0	0.50	22		06
8-18-64	72	8° ° °	341	1.20	0.58	36	0.10	1	1	24	16	0.08	9.0	0.42	18		89
9-22-64	19		359	1.25	99.0	1.70	0.13		-	26	17	0.6	9.0	09.0	2.1		96
									-								

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES LAHONTAN DRAINAGE PROVINCE (W) TABLE D-2

Anolyzed			DWR	DWR	DWR	DWR	SBCFCD	DWR	DWR	DWR
oxygen	Percent		8	75	78	81		83	88	र्च
Dissolved oxygen	Ports per million		7.2	4.7	9.8	4.6		9.5	4.6	9.
	Phenol	19								
r million	Turbidity	9	< 25	425	425	425		425	< 25	A 22
Constituents, in parts per million	NH4									
Constituent	Syndets	æ								
	PO4	MOJAVE RIVER								
Coliforma	MPN/ml		62	1300 620 ebris	44.5 44.5	2.3		2.3 23 b water	6.2 1.3	40.2
Field all		number	0.8	8.0 1300 620 twigs and debris	7.5	7.4		7.5 owing through	7.3	4° ℃
Gage ht.(ft)	Flow (cfs)	Stream name and station number NEAR VICTORVILLE	1.76	11-6-63 2.11 1615 30 Clear; floating leaves,	2.38	2.57		2-6-64 2.55 7.5 23 23 2205 31 and sand flowing through water	2.59	2.54
Dote	Remorks	Stream name and	10-4-63 1030 Clear	11-6-63 1615 Clear; flos	12-5-63 1120 Clear	1-14-64 1300 Clear	1-30-64	2-6-64 1205 Clear; silt	3-6-64 1225 Clear	4.4.64 0610 Clear

MINEHAL ANALYSES OF SURFACE WATER

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

	Temp		Specific conduct-	>	Mineral co	constituents	Ë	pod	ports per equivalents percent re	millio per sactance	million			Mineral parts p	constituents per million	lion	
DATE SAMPLED	when sampled	Hd	once (micro- mhos at 25°C)	Colcium	Mogne- sium Mg	Sodium	Potas-	Carbon- ate CO3	Bicar - bonate HCO ₃	Sulfate SO ₄	Chlo- ride Cl	Ni - trote NO ₃	Fluo-	Boron	Sili- ca SiO ₂	TDS Total Evap180°C hardnes Computed CaCO3	Total hardness CaCO ₃
Stream name and station	1	number			Σ	MO IAVE R	RIVER				27						
NEAR VICTORVILLE	ш			67													
17- 4-63	69	7 • 8	516	1	1	5.17	1	0	210	1	34	1	1	0.13	1		156
11-6-63	2	٠. م • ٢	482	2.15	0.82	2.13	0.13	0	3.56	36	30.85	1.5	9 • 0	0.14	27	290	14%
12- 5-63	55	7.6	481	38 1.90	1.07	2.00	0.10	0	3.39	36	30	40.0	0	0 • 10	3,	307	* 5
1-14-64	\$ 4	6.6	432	39	0.74	45	0.08	С	195 3.20 67	38	27 0 . 76	2.5 0.04	0 • 2	0.10	23	0 8 5 6 8 3	35
1-30-64	8	8 • 1	452	2.15	0.74	1.96	0.08	0	3.39	36	29	3.3	1.00	0.11	1	281	145
2- 6-64	5 5	7 • 8	450	40 2.00 41	0.93	1.87	0.000	0	3.28	410.85	27 0 . 76 15	3.0 0.05	9.0	0.10	2 3	295	145
3- 6-64	55	7 - 7	077	2.15	0.66	1.87	0.05	0	198 3•25 68	35	25 0.71 15	6.0 0.0 0.0 0.0 0.0	0.5	0	54	270	141
79-7 -7	6 *	7.6	6443	2.25	8 0.666 14	1.83	0.05	0	196 3-21 67	38 0•79 16	0.76	2.0	0 0	0.10	~) ~	260	146

MINERAL ANALYSES OF SURFACE WATER FIELD COSTIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES TABLE D-2

Analyzed	by b		DWR	DWR	DWR	DWR	DWIR
oxygen	Percent		88	16	901	76	105
Dissolved oxygen	Parts per million		7.7	8.6	t1.6	0.6	9.5
	Phenol						
r million	Turbidity	29	425	₹ 25	4 25	1	A 25
Constituents, in ports per million	NH4						
Constituent	Syndets						
	PO4	MOJAVE RIVER					
Celiforma	MPN/ml	A,	13. 2.3	6.2	130	700+	982
1	01014	number	7.4	7.4 ved	7.4	4.7	ب
Gage ht.(ft)	Flow (cfs)	Streem name and station number NEAR VICTORVILLE	2,49		2.26	2.30 21.4 vegetation	2.45
Date	Remarks	Streem name and NEAR VICTORVILLE	5-7-64 1630 Clear	6-4-64 2.35 1040 18 Clear; small fish obse	7-15-64 1120 Clear	8-7-64 1110 Clear; much	9-3-64 1440 Clear

MINEMAL ANALYSES OF SUFFACE WATER

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

	Temp		Specific conduct-	Σ	Mineral co	constituents	ë	pod	parts per equivalents percent re	parts per million equivalents per million percent reactance value	million			Mineral constituents parts per million	consti er mi	luents in	
DATE SAMPLED	when sampled in o F	Hd	(micro- mhos at 25°C)	Calcium	Magne- sium Mg	Sodium	Potas - Rum K	Corbon- ofe CO ₃	Bicar - bonate HCO ₃	Sulfate SO ₄	Chlo-	rote NO3	Fluor	Boron	Silt-	TDS Evap1809C Evap1059C Computed	Total hardness CaCO3
Stream name and	station	number			N	MOJAVE R	RIVER				67						
NEAR VICTORVILLE	ш			67													
5- 7-64	67	7.9	797	2.10 43	10	1.87	0.05	0	198 3.25 67	0.83	26 0.73 15	1.2	9.0	0.12	24	297	146
79-7 -9	69	7 . 7	473	42 2.10 42	12 0.99	1.87	30.08	0	205	41 0.85	28 0.79 16	2.2	0.0	0.13	27	300	156
7-15-64	7.1	7 • 4	503	2.30	0.74	2.13	3 0.08	0	210	46 0.96 18	0.63	0.03	9.0	0.15	24	321	152
49-7-6	16	7 . 4	497	4.5 2.25 4.4	9 0 74	48 2.09 41	0.08	0	3.44	43 0.90 17	32 0.90	0.02	9.0	0.15	7.2	326	150
40 L 8 L 7	7.3	7 . 8	516	38 1,90 36	1.15	2.17	0.083	0	3.36	47 0.98 18	0.96	0.0	0.7	0.14	1	305	153

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES

Analyzed	by b			DWR	DWR	DWR	DWR	DWR	DWR	DWR	DWR
oxygen	Percent			107	8	83	103	110	79	16	† ₈
Dissolved oxygen	Ports per million			9.6	8.7	10.2	11.0	10.4	8.6	11.2	φ
	Phenol	67A									
r million	Turbidity	9		4 25	425	425	425	425	4 25	4 25	V 52
Constituents, in parts per million	NH4										
Constituent	Syndets									ηO°0	
	PO4	MOJAVE RIVER								0.08	
Coliforma	MPN/ml			m m ⊶ N	23	0 0 0 0	2.3	95.	5°.	62.	0.1.0 0.3.3
1		n number		8.0 msects	8,5	7.6	7.6	7.8	7.3 of sampling	7.4	7.6
Gage ht.(ft)	Flow (cfs)	and station	S	-1.5	None 20 est.	None 30 est.	None 20 est.	None 22 est.		None 4 est. inge; foam	1610 Clear; many trout observed
Date	Remarks	Stream name and statio	AT THE FORKS	10-4-03 None 1145 15 est. Clear; small fish and	11-6-63 1415 Clear	12-5-63 1015 Very clear	1-14-64 1410 Clear	2-0-64 1040 Clear	3-6-64 None 1115 30 est. Clear; snowing at time	4-4-64 None 0800 4 est.	5-7-04 1810 Clear; many

MINERAL ANALYSES OF SURFACE WATER

TABLE D-2

WATER	(W) 3
SURFACE	PROVINCE
ANALYSES OF	DRAINAGE
MINERAL AN	LAHONTAN

Sodium Sodium Sium Corbon Bicar Solidar So	Temp	Specific conduct-	2	Mineral co	constituents	ü	parts equiva percen	t Pen	millior per actance	million			Mineral parts	constituent per million	constituents in per million	
Colave River Colored	(micro- mhos at 25°C)	1 0	Calcium	Mogne- sium Mg	Sodium	Potes- sium K	Carbon- ate CO3		Sulfate SO ₄	Chlo- ride	trote NO3	Fluo- ride	Boron	S:11-	Evapl809C Evapl059C Computed	Total hardness caco ₃
2.57 2.57 2.57 2.57 2.57 2.57 2.58 2.59 2.59 2.59 2.59 2.59 2.59 2.59 2.59	number			Σ		IVER				67A						
5.1 0.08 0.046 49 1.02 0.05 3.0 0.016 5.5 0.08 0.02 0.034 0.001 0.01 0.01 0.01 3.6 0.02 0.02 0.05 0.05 0.00 0.01 0.01 1.57 0.05 0.02 0.05 0.05 0.00 0.00 0.00 1.57 0.03 0.01 0.02 0.03 0.01 0.00 0.08 1.57 0.03 0.03 0.03 0.01 0.02 0.08 1.30 0.03 0.03 0.04 0.02 0.08 1.22 0.04 0.04 0.02 0.03 0.04 47 0.05 0.05 0.03 0.04 0.05 0.03 1.22 0.05 0.05 0.04 0.05 0.03 0.04 0.05 1.22 0.05 0.05 0.06 0.06 0.06 0.06 0.06 1.22 0.05 0.05 0.06 0.06 0.06 0.06 0.06	7.9	777	-	9	59	1	0	151	1	- m	1	1	0.23	1		96
36 0.2 0.059 0.28 0.018 2.00 0.699 0.028 0.010<	7.6	379	1.20	0.49	2.22	0	0	146 2.39 64	1.02	0.34	0.01	9.0	0.16	24	225	8 %
1.57	7.5 289	0	0.85	0.58	36	0.05	0	122 2.00	0.69	1 2.	0.0	2.0	0.10	32	160	72
1.30 0.03	8.0 290	0	1.15	0.41	1.57	0.03	0	127 2.08	33	0.31	1.0	2 • 2	0 0 0	22	200	78
1.22 0.05	7.9 24	5	1.00	0.41	1.30	0.03	0	11.92	23 0 48 18	-2-	0 • 1	2.0	0 • 0 8	21	150	71
0.52 0.03	7.7 260	0	1.10	0.33	1.22	0.05	0	116	21 0.44	. 2	2.0	1.6	0.04	50	167	72
5 0.65 0.03 1.34 0.19 0.17 0.01 4 37 2 1.34 0.19 0.17 0.01	7.6 13	5	0.70	0.16	~ ~ w	0.03	0	1.03	0.17	0.20	0.01	5.0	0.12	19	88 6 85	43
	7.6 175	5	0.85	0.25	0.65	0.03	0	1.34	0.19		0.01	0	0 0 8	19	127	5

ANALYSES FIELD OF

		CHEMICAL	
ABLE U'S	MINERAL ANALYSES OF SURFACE WATER	DOBERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL	LAHONTAN DRAINAGE PROVINCE (W)
	MINERAL	BACTERIOLOGICAL	LAHONTAN
		SERVATIONS,	

Date	Gage ht.(ft)	44.5	Celiformo		Constituen	Constituents, in parts per million	er million		Dissolved	oxygen	Analyzed
Remarks	Flow (cfs)	F 10 10 1	MPN/ml	P04	Synders	NH4	Turbidity	Phenol	Ports per million	Percent	by b
Stream nam	Stream name and station number	number		MOJAVE RIVER	JR		67A				
AT THE FORKS	KS										
0930 Clear; lare	None 30 est.	".lt rout observed					A		., .,	8	DWR
,-15-64, 1220 Clear; swin	,-15-64 1220 Glear; swimmers upstream	†*	133				A		٥.۶	11	DWR
8-7-64 0930 Clear; mucl	8-7-64 Lone 10930 Lest.	on bottom and surface	Stro 62 nd surface				1		٠,٠	%	DWK
9-3-64 1325 Clear; oil	9-3-64 Note 1.5 est. Clear; oily film on sur	7.3 662 662 Arsenic = 0.0 ppm	66 66 0.0 ppm : = 0.0 ppm				V V		⊅ .	57	DWR

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
LAHONTAN DRAINAGE PROVINCE (W)

	Temp		Specific conduct-	2	Mineral co	constituents	Ē	900	equivalents percent re	equivalents per million percent reactance value	million			Mineral constituents parts per million	const	fuents in	
DATE SAMPLED	sampled in o F	Hd	(micro- mhos at 25°C)	Colcium	Mogner	Sodium	Potos- sium K	Carbon- ote CO ₃	Bicar - bonate HCO ₃	Sulfate SO4	Chlo-	Ni – trate NO ₃	Fluor	Boron	S.11.7 co S.10.2	TDS Total Evap180°C hordness Evap105°C csC03	Total hardness CaCO ₃
Stream name and station number	stotion n	numbe															
AT THE FORKS						MOJAVE RIVER	IVER				67A						
79-4-9	62	7 . 8	226	1.00	0.33	1.00	0.05	0	106	0.35	0.20	1.8	1.2	0.07	22	147	67
7-15-64	7.1	٠ س	349	1.20	0.49	1.91	0.08	0	139 2.28 63	1.00	12 0 34	0.02	2.0	0.15	19	230	8 2
8- 7-64	80	7.5	369	1.35	0.41	2.00	3 0.08	0	167 2°74 71	35 0 . 73	13	0.02	2.4	0.17	56	255	80
9- 3-64	74	7.5	463	33 1.65 35	0.58	2.39	0.08	0	171 2.80 60	1.46	15 0 . 42	0.02	2 . 8	0.19	25	297	112

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER FIELD OBSERVATIONS, BACTERICOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES

COLORADO RIVER BASIN DRAINAGE PROVINCE (X)

Anolyzed	by b		DWR	DARR
oxygen	Percent		76	8
Dissolved oxygen	Ports per million		9.2	o.
	Phenol			
ır million	Turbidity	45	4 25	₹0 V
Constituents, in parts per million	NH4			
Constituent	Syndets	RIVER		
	PO4	COLORADO RIVER		
Coliform®	IMPN/ml		5 40.45	0.65 0.45 0.0 = 0.0
1	rield pre	number	7.8 erved	8.1 grved; arsen
Gage ht.(ft)	Flow (cfs)	Stream name and station number	NEAR TOPOCK, ARIZONA 5-18-64 18.19 7, 1720 9890 Clear; large fish observed	9-11-64 1350 Clear; large fish observed; arsenic = 0.0 ppm
Date	Remarks	Stream name	5-18-64 1720 Clear; la	9-11-64 1310 Clear; la

MINERAL ANALYSES OF SUHFACE WATER

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
COLORADO RIVER BASIN DRAINAGE PROVINCE (X)

	Total hardnes as CaCO ₃		347	339	
constituents in per million	Sili- Evapl80°C hordness co Evapl05°C os SiO ₂ Computed CoCO ₃		713	726	
constituent per million	Sili- co SiO ₂		10	11	
Mineral parts p	Boron		0.16	0.15	
	Fluo- ride		0.5	0 . 5	
	Ni - trote NO ₃		1.4	2 0 • 0 3	
nillion per million tance value	Chlo- ride Cl	54	2.62	2.65	
000	Sulfate SO ₄		292	294 6.12	
- a	Bicar - bonate HCO ₃		156 2.56 23	151 2.47 2.22	
ports equiva percen	Carbon- ofe CO ₃		0	0	
i	Potes- sium K	RIVER	0.10	0.13	
constituents	Sodium	COLORADO RIVER	100	100	
Mineral co	Mogne- sium Mg		2.55	2.38	
Σ	Colcium		888 39	88 939 939	
Specific conduct-	micro- mhos at 25°C)		1048	1079	
	H	umber	7.6	7.8	
Temp	when sampled in °F	IZONA	65	8 9	
	DATE SAMPLED	Stream name and station number NEAR TOPOCK, ARIZONA	5-18-64	9-11-64	

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES TABLE D-2

COLORADO RIVER BASIN DRAINAGE PROVINCE (X)

Analyzed	by b			DWR	DMR
oxygen	Percent			96	98
Dissolved oxygen	Ports per million			8.8	7.5
	Phenol				
r million	Turbidity	55		4 25	A 25.
Constituents, in ports per million	4HN				
Constituent	Syndets	IVER			
	P04	COLORADO RIVER			
Coliferme	MPN/ml			62.2 62	ww.
7 7 7		number		7.8	m œ
Gage ht.(ft)	Flow (cfs)	Stream name and station number	ER DAM	18.86	13200
Dote	Remarks	Stream name	BELOW PARKER DAM	5-19-64 0815 Clear	9-9-64 1705 Clear

TO BOWN ORD BOOK WINDOW BENTE OUVED 100

MINEHAL ANALYSES OF SURFACE WATER

TABLE D-2

		$\widehat{\times}$
E WATER		PROVINCE
CHREAC		DRAINAGE
AL ANALYCES OF		RIVER BASIN
MINEBAL	WINCH.	COLORADO R

	Total hardness caco ₃		345	336	
fuents in	Evapl809c hardness Evapl059c caC03		711	728	
consti	S:11- co S:02		10	11	
Mineral constituents parts per million	Boron		0.13	0.15	
	ride F		0 • 5	0 . 5	
	Ni - trote NO3		1.6	0.02	
million	Chlo- ride	5.5	90 2.54 23	94 2.65 23	
million per ctance	Sulfate SO ₄		289	297 6.18 55	
parts per equivalents percent rea	Bicar - bonote HCO ₃		156 2.56 23	148	
por	Carbon- ate CO ₃		0	0	
ri .	Potas- sium K	RIVER	0.13	0.13	
constituents	Sodium	COLORADO	98	98 4.26	
Mineral co	Mogne- sium Mg	00	2.55	30 2.47	
2	Calcium		87	85 4.24 38	
Specific conduct-	micro- mhos at 25°C)		1031	1079	
	H	number	8 . 2	7.7	
Temp	when sampled	tation	67	77	
	DATE SAMPLED	Stream name and station BELOW PARKER DAM	5-19-64	79-6 -6	

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES TABLE D-2

Analyzed	by b			DWR	DWR	DMR
oxygen	Percent			108	117	107
Dissolved	Ports per million			۵. ۵	æ. æ.	O w
	Phenoi					
r million	Turbidity	95		A 255	100	SE SE
Constituents, in parts per million	NH4					
Constituents	Syndets	置				
	PO4	COLORADO RIVER				
Coliferme	MPN/ml			† † † † † † † † † † † † † † † † † † †	24,	a a. ⊙ ⊙
100		number		7.6	7.14	m ω
Gage ht.(ft)	Flow (cfs)	Stream name and station	IZONA	114.03	113.77 900 est.	113.88
Dote	Remarks	Stream name	AT YUMA, ARIZONA	5-12-64 1450 Clear	7-7-64 1215 Turbid	9-8-64 1/15 Clear

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TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

0	Temp		conduct-	2	Mineral constituents	onstituent	ni s	bed	equivalents percent r	equivalents per million percent reactance value	million			Miner	- 8	s per m	Mineral constituents parts per million
DATE SAMPLED	sompled in oF	Ha	(micro- mhos at 25°C)	Calcium	Magne- sium Mg	Sodium	Potas - sium K	Carbon- ate CO ₃	Bicar bonate HCO ₃	Sulfate SO ₄	Chlo- ride Cl	rrate NO ₃	Fluo- ride F	Boron		Sili- ca Si0 ₂	Sili- Evapl80°C hordness Si02 Computed CaC03
Stream name and station AT YUMA, ARIZONA	ation	number				COLORADO	O RIVER				95						
5-12-64	0 80	7.7	5694	160	5 • 18 5 • 18	360 15.65 54	0.18	0	234 3.84	484 10•08 35	529 14.92 52	2.4	1.0	0.52	188	~	1814
7- 7-64	8 7	7 • 8	3920	206 10.28 25	91 7•48 18	540 23.48 57	0.20	0	256	597 12.43	888 25.04	25 0 • 40	5.0	0.68	19		2732
79-8 -6	80	7.5	4184	208	7.32	582 25•31 59	0.20	0	250	613	943 26.59 61	12	1 • 1	© 88 88	138		2883

CHEMICAL ANALYSES TABLE D-2 FIELD OBSERVATIONS,

	-	
MINERAL ANALYSES OF SURFACE WATER	S, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL	COLORADO RIVER BASIN DRAINAGE PROVINCE (X)
ACE	A. Al	SE F
SURF	TIONS	AINA
S	AINA	DR
ANALYSE	DETER	BASIN
VERAL .	OGICAL	RIVER
Ī	BACTERIOL	OLORADO
	**	O

Analyzed	by b		DWR	DWR	DWR
Dissolved oxygen	Percent		63	105	118
Dissolved	Ports per million		0,	0.	٠, ب
	Phenol	A			
r million	Turbidity	56A	₹ 52	37	e e
Constituents, in parts per million	NH4				
Constituent	Syndets	CANAL			
	PO4	ALL AMERICAN CANAL			
Coliferme	MPN/mi		2.3	6.2	2400
3	Field pH	number	7.8	7.6	8°.8
Gage ht.(ft)	Flow (cfs)	Stream name and station number NEAR PILOT KNOB	17.22 5800 est.	17.43 8900 urbid	17.30 6670 enic = 0.0 ppm
Date	Remarks	Stream name and NEAR PILOT KNOB	5-13-64 0830 Clear	7-7-64 17.43 1245 8900 Slightly turbid	9-8-64 1645 Clear; arsenic = 0.0

MINERAL ANALYSES OF SURFACE WATER

TARIF D-2

		8
	E WATER	PROVINCE (X)
101	SURFAC	OLORADO RIVER BASIN DRAINAGE PROVIN
י מטרו	ANALYSES OF	BASIN
	ERAL AN	RIVER
	N	COLORADO

	Total hordness caco ₃		372	360	∽ 9 €	
ë	200 200 200 200 200 200 200 200 200 200					
constituents per million	Evapl80°C hardness Evapl05°C caco ₃		828	810	8 2 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	
const	S:1:- ca S:02		11	13	8	
Mineral constituent parts per million	Boron		0.16	0.14	0.21	
	Fluo- ride		0.5	0 • 5	9	
	Ni - trate NO ₃		1.5	3 0.05	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
million	Chlo- ride Cl	56A	125 3.53 2.7	3.24	3, 133	
ts per million reactance value	Sulfate SO ₄		326 6.79 52	323	5 8 8 9 8 9 8 9 8 9 8 9 9 9 9 9 9 9 9 9	
- e	Bicar - bonate HCO ₃		171 2.80 21	162 2.66 21	2.694	
por ts equivo	Carbon- ofe CO ₃	ANAL	0	0	0	
Ë	Potas- sium K	ICAN C	0.13	5 0 • 13	0 • 1 3	
constituents	Sodium	ALL AMERICAN CANAL	130 5.65	125 5 44 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	6 0 3 4 5 4 5 4 5 4 5 4 5 4 5 4 5 4 5 4 5 6 5 6	
Mineral co	Magne- sium Mg	AL	2.80	33 2.71	2 2 3 3 4 3 4 3 4 3 4 3 4 3 4 3 4 3 4 3	
2	Calcium		4.09	4.49	4 9 0 0 4 0 0	
Specific conduct-	(micro- mhos at 25°C)			1219	1177	1283
	Hq	number	0 &	8 0	7 • 7	
Temp	sampled In oF		75	8	ν ®	
	DATE SAMPLED	Stream name and station NEAR PILOT KNOB	5-13-64	7-7-64	49-8	

MINERAL ANALYSES OF SURFACE WATER

MINERAL ANALYSES OF SURFACE WATER FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES TABLE D-2

Analyzed	ру р		DWR	DWR	PAGE 1
oxygen	Percent		180	28	N.
Dissolved oxygen	Parts per million		0.0	† · · · · · · · · · · · · · · · · · · ·	<i>3</i>
	Phenoi	æ.			
r million	Turbidity	563	Å.	Ā	<u>A</u>
Constituents, in parts per million	NH4				
Constituent	Syndets	VER			
	PO4	CCLORADO RIVER			mdd 0.0
Coliform®	MPN/ml		9 = 0		ish observed; arsenic = 0.0 ppm
7	200	number	7.6 ir water	7.4	ish observe
Gage ht.(ft)	Flow (cfs)	Stream name and station number BELOW MORELOS DAM	99,24 73.3 1997 tatio.	1993 7.4 1055 65 1st. Jimshy turbid; lange (tah observ	Greenish tinge; large
Dote	Remarks	Stream name and st BELOW MORELOS DAM	5-12-64 1252 UP art; rom	7-7-54 1055 013.00019 to	lbos Oreenish t

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
COLORADO RIVER BASIN DRAINAGE PROVINCE (X)

	Total hordness CaCO ₃		950	616	165					
uents in Iion	T D S Evap180°C Evap105°C Computed		1364	1518	1580					
constit er mit	S.11 co S.02		16	16	5					
Mineral constituents parts per million	Boron		EN EN CO	0 • 33	0.42					
	Fluo-		0.7	0 • 7	- Φ					
	rote NO3		1.8	2 0 • 0 3	19 0 • 31					
million per million tance value	Chlo- ride	999	319	367	358 11.22 45					
0	Sulfate SO ₄		427	451	463 9.64 39					
parts per equivalents percent re	Bicar - bonote HCO ₃		3.75	232 3.80 16	231 3.79 15					
ports equivo percer	Carbon- ote CO ₃		0	0	0					
Ë	Potas - sium K	RIVER	0.15	0.15	0.18					
constituents	wn pos	COLORADO RIVER	246	269	293 12 - 74 52					
Mineral co	Magne - srum Mg	00	50 4•11	54 4.044	4.52 18					
W	Calcium	number	138	143	146					
Specific conduct-	- 0					2011	2187	2354		
	H		6.7	7 • 7	7 . 6.					
Temp	sampled In o F	10n	# C*	9.6	?					
	DATE SAMPLED	Stream name and station RELOW MORELOS DAM	5-1.7-64	7 = 7 -644	59-9-6					

TABLE D-2

FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES MINERAL ANALYSES OF SURFACE WATER

COLORADO RIVER BASIN DRAINAGE PROVINCE (X)

Anolyzed	by b		DWR DWR
oxygen	Percent		105
Dissolved oxygen	Parts per million		4. 6.
	Phenol	D	
r million	Turbidity	295	A A 20
Constituents, in parts per million	NH4		
Constituents	Synders	VER	
	PO4	COLORADO RÍVER	
Coliforma	MPN/mi		240 6.5
1 4		number	o. a
Gage ht.(ft)	Flow (cfs)	Stream name and station number 17% FLYTE	9-20-64 None 10:200 Clear; swimmers in water 9-9-64 ho690 Clear
Date	Remorks	Stream name	9-20-64 0lear; swi 9-9-64 1435 Clear

MINEHAL ANALYSES OF SURFACE WATER

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

	Total hardness as CaCO ₃		354	6 9 9		
Mineral constituents in parts per million	Evap1809C hardness Evap1059C as		724	7 2 5 6		
consti er mi	Sifi- co SiO ₂		11	15		
Mineral constituent parts per million	Boron		0.13	0.16		
	Fluo- ride F		0 • 5	• • •		
	Ni - trote NO ₃		1.4	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
million per million stance value	Chlo- ride	56C	92 2.59 23	2 2 4 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9		
0	Sulfate SO ₄		297	9 00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		
ports per equivalents percent re	Bicar - bonate HCO ₃		157	2.47		
pod	Carbon- ate CO ₃		0	0		
.c	Potos- sium K	RIVER	5 0 • 13	0 1 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9		
nstituents	Sodium	COLORADO RIVER	OLORADO	101	108	
Mineral constituents	Magne- sium Mg	Ü	2.63	2, 30		
Σ	Colcium				86	9 4 8 4 6 6 4 8 4 6 6 6 6 6 6 6 6 6 6 6 6
Specific conduct-	micro- mhos at 25°C)		1063	1118		
	Hď	number	8 . 2	8 .		
Тепр	when sampled in o F		73	© ©		
	DATE SAMPLED	Stream name and station NEAR BLYTHE	5-20-64	\$ 9 1 6 1 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6		

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES

COLORADO RIVER BASIN DRAINAGE PROVINCE (X)

Analyzed	by b		LEED	dren.	DAD	TIME	TWD	A SERVICE	3.k.o.	988	
oxygen	Percent		1	1	!	1	}	1	1	l t	
Dissolved oxygen	Ports per million		1	!	1	1	t t	;	;	1 1	
	Phenoi										
r million	Turbidity	doc.	**	1.	1.	·. _	9:	1	1	7:	
Constituents, in parts per million	NHA										
Constituent	Syndets	4									
	P04	Car all safes									
Coliforma	MPN/ml	S	1 .	1 - 3) ! Prom	1		1 7	11 2 7 75	1	
:	Hd DIO	number	2 2 2	1 10	1	1	1 2		1 1	1	
Gage ht.(ft)	Flow (cfs)	1	=	A 5. (100) (3.0) . 1.	(3E) = (E)	(caco ₃)				12	
Date	Remarks	Stream name and station		1, 1	12-3-1			1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -		5-2-6	

TABLE D - SURFACE WATER

TABIE D.2

		$\stackrel{\sim}{\times}$
	WATER	PROVINCE (
2-0	SURFACE	DRAINAGE
U	OF	
HOL	ANALYSES	BASIN
		RIVER
	WINERAL	S
	MINE	COLORADO

	Тетр		Specific conduct-	Σ	Mineral co	constituents	ë	por	parts per equivalents percent re	millior per actance	million			Mineral	consti	constituents in	
DATE SAMPLED	when sampled in o F	Hd	(micro- mhos at 25°C)	Colcium	Magne- sium Mg	Sodius	Potas- sium K	Carbon- ate CO ₃	Bicar - bonate HCO ₃	Sulfate SO ₄	Chlo- ride	rote NO3	Ftuo-	Boron	S:11-	TDS Evap180°C Evap105°C Computed	Total hordness 0s CoCO3
Stream name and station AT AQUEDUCT INTAKE	ion	number				COLORADO	RIVER				960						
10- 1-63	62	-	1025	3.84	2.30	66° 70°4 336	0.13	0.13	127	276 5.75 56	2.31	1.0	0.3	-	10	639	307
11- 5-63	7.1	es •	1025	3,99	2.30	94 4.09	0.13	0	143	277 5.77 55	81 2.28	1.0	7.0	1	10	149	315
15- 3-63	0 9	ţ	1020	83 4.14 39	2.30	93	0.13	С	149	279 5.81 55	2.31	1.3	0.4	1	0	656	352
1- 7-64	5	8 • 2	1045	4.14 39	2 - 38	94 4.09 38	5 0 • 13	0	149 2.44	283	2.40	1.6	7.0	1	10	699	326
3- 3-64	0 9	t	1040	4.34	2.22	3.91	0.13	0.03	150	280	81 2.28 21	1.7	7.0	i i	2	658	3 2 8
79-1 -7	6 1	e •	1050	4.34	2.30	3 · 83	5 0 • 13	0.03	149 2.44 23	279 5.81 55	2.26	1.2	0 0	1	1	654	332
79-5 -5	99	9	1050	87	2.30	4.04	0.13	0	146 2 39 22	286	2.48	1.3	7.0	1	1	671	3 3 2
6- 2-64	77	9 0	1100	38	2.38	96	0.13	0	150	293 6 • 10 55	88 2.48 22	1.2	7.0	1	0 7	686	339

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES

Analyzed	ph p			IMD	OW!	MMD			
Dissolved oxygen	Percent			;	!	1 1			
Dissolved	Parts per million			1	1	1 1			
	Phenoi	26D							
r million	Turbidity)5		1.0	5.0	7:0			
Constituents, in parts per million	NH4							 	
Constituen	Syndets	IVER							
	PO ₄	COLORADO RIVER		ma d	ud d	wd		 	
Coliform	MPN/ml			002 = 1.0	0.4 = 300	0.0 = 500			
7	rield ph	number		112 ppm; free	los ppm; free	Mob ppm; free			
Gage ht.(ft)	Flow (cfs)	Stream name and station number	T INTAKE	$\frac{7-7-6^{1}}{\text{Alkalinity}} \left(\text{CaCO}_{3} \right) = 1$	/_4_64 //Jkalinity (CaCO ₃) = 1	9-1-64 Alkalinity (CaCC ₃) = 1			
Date	Remarks	Stream name	AT AQUEDUCT INTAKE	7-7-64 Alkalinity	f-4-64 Alkalinity	9-1-64 Alkalinity			
							-106-		

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

	Тетр		Specific conduct-	2	Aineral CC	Mineral constituents	i.	pot ed r	parts per equivalents percent r	parts per million equivalents per percent reactance	million			Mineral constituents parts per million	const	ituents in	-
DATE SAMPLED	sampled In o F	Hd	(micro- mhos at 25°C)	Calcium	Mogne- stum Mg	En pog	Potas -	Carbon- ate CO ₃	Bicar - bonate HCO ₃	Sulfate SO ₄	Chlo- ride	Ni – trote NO3	Fluo-	Boron	Sili- co SiO ₂	TOS Evap1809C Evap1059C Computed	Total hardness cacos
Stream name and station	station	number				COLOBADO RIVER	RIVER				560						
AT AQUEDUCT INTAKE	TAKE										2						
7- 7-64	81	8 .3	1100	4.34	2.38	96	0.15	0.13	129	294	95	0.0	0.4	1	12	688	336
	ò		0011	200			7		7 0	000	47	(088	(
49-7 -8	0			4.09	2.47	4.39	0.15		2.10	6 • 29	2.71	0.01	† • •	i i	7 7	9 6	328
				5					61	0	\$ 7					769	
	82	8 • 6	1090	19				_	122	567	96	0.3	5.0	1	10	680	321
9- 1-64				3.94	2.47	4.35	0.15	0.13	2.00	6.12	2.71					680	

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES

Anolyzed	by b			DWR	DWR	DWR	DWR	DWR	DWR
oxygen	Percent			89	†	94	70	68	8
Dissolved	Ports per million			8.0	4.0	ή*η	6.2	7.3	4.7
	Phenol	57							
er million	Turbidity				20	280	500		
s, in parts per million	NH4				٦. 8			1.8	a
Constituents,	Syndets			9.0		on banks			
	P04	NEW RIVER		e. 9	ų	s deposited			0°0 bpm
Coliform	MPN/ml			24,000 24,000	24,000 7,000 ; sewage odo	6,200 1,200 1; white salt	2,400	62,000 620,000 ge odor	62,000 240,000 stream; arsenic = 0.0 ppm
7	בום סום	number	MEX	a.6 24,000 24,000 mall fish opserved	9.0 24,000 7,000 of raw sewage; sewage odor	8.2 6.200 1,200 black bottom; white salts deposited on banks	8.2 stream	7.5 stream; sewa	7.6 sewage in st
Gage ht.(ft)	Flow (cfs)	Stream name and station number	AT INTERNATIONAL ECURDARY	11-5-65 960.57 10:52 899 Turbid, spwnee odor;	1-0-64 959.03 1030 108 Turbid, lurge amount	3-11-64 959.29 1330 174 Naw sewage in stream;	5-11-64 959.18 1215 158 Turbid; raw sewage in	7-7-64 958.79 7.5 62,000 1500 126 CPU,00C Turbid; raw sewage in stream; sewage odor	9-8-64 1310 Very turbid; much raw sewage in
Date	Remarks	Stream name	AT INTERN	11-5-63 1035 Turbid, se	1-0-64 1030 Turbid, 1	3-11-64 1330 Kaw sewage	5-11-64 1215 Turbid; re	7-7-64 1500 Turbid; r	9-8-64 1310 Very turb

TO STATE OF THE PROPERTY OF TH

MINEHAL ANALYSES OF SURFACE WATER

TABLE D-2

	$\widetilde{\times}$
OF SURFACE WATER	DRAINAGE PROVINCE
ANALYSES OF	BASIN
	RIVER
MINERAL	COLORADO

	Total hardness caco ₃		777	970	962	1054	1195	124.2
constituents in per million	TDS Total Evap1809C hardness Evap1059C CoComputed		2630	3630	3394	3906	5287	5150
consti	Sili-		24	16	22	50	23	27
Mineral constituent parts per million	Boron		0 • 78	1.12	1.12	1.45	1.80	0 8 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
	Fluo- ride F		1.0	0.7	1.4	0 • 8	1.0	6.
	trote NO3		21 0 34	5.0	3.7	1.2	20	12 0 • 19
million per million tance value	Chlo- ride Cl	57	930 26.23	1385 39.06 67	1340	1579	2220 62.60	2200
000	Sulfate SO ₄		543 11.31 27	674 14.03	670 13.95	770	765 15.93 19	16.45
parts per equivalents percent re	Bicar - bonate HCO ₃		3.75	295	325	306.5 • 02.8	3.74	370
parts equiva percen	Carbon- ote CO ₃		0	0	0	0	0	0
Ë	Potas- sium K	W.	0.56	1.02	0.10	37 0.95	1.76	10.01
constituents	Sodium	NEW RIVER	580 25.22 61	875 38.05 65	874 38.00 66	1008	1320	1311 57.00 68
Mineral cor	Magne- sium Mg	Z	8.14 20	109 8 • 96 15	104	130	11.51	11 14 3 11 0 7 6 14
Mi	Calcium		148	209	214	208 10•38	248 12•38 15	262 13.07 16
Specific conduct-	mhos at 25°C)		4120	5464	5288	0609	7825	7813
0, 0	Hd	number	7 • 4	7 • 4	0	7.5	7 . 4	· ·
Temp	sompled in o F	station n	70	52	79	77	9.5	91
	DATE SAMPLED	Stream name and station number at INTERNATIONAL BOUNDARY	11- 5-63	1- 8-64	3-11-64	5-11-64	19-1-64	79-8 -6

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES TABLE D-2

Analyzed	by b			DWIR	DWR	DWR	DVAR	DWR	DWR	
oxygen	Percent			91.	8	7.9	78	బ్	107	
Dissolved oxygen	Parts per million			7.0	8.0	8.8	9.9	9.9	cv c	
	Phenol	5.8								
er million	Turbidity			1	500	370	185	500	500	
Constituents, in parts per million	NH4									
Constituent	Syndets									
	PO4	LEW RIVER								
Coliform	MPN/mi			6200	24000	2400	2400	2400 6400	2400 2400	
7	200	number		7. €	7.6	7.4	7.14	7.14	tr.7.	
Gage ht.(ft)	Flow (cfs)	Stream name and station number	TORLAID	773.05	7772.50	773.58	773.19	772.92 442	9-7-64 773.37 1945 Turbid; arcenic = 0.0	
Dote	Remarks	Stream name	LEAR WESTHORDAM	11-4-63 1145 Turbid	1-8-64 1410 Turbid	3-11-6/4 0945 Turbid	5-11.64 1530 Turbid	7-6-64 1415 Turbid	9-7-64 1945 Turbid; an	

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TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

	Temp		Specific conduct-	Σ	Mineral co	constituents	.s	parts equiva percen	de_	00	million per million tance value		_	Mineral parts p	constituent per million	constituents in per million	
DATE SAMPLED	when sampled In OF	Hd	ance (micro- mhos at 25°C)	Colcium	Magner	Sodius	Potas- sium K	Carbon- ate CO ₃	Bicar - bonate HCO ₃	Sulfate SO ₄	Chlo- ride Cl	Ni - trate NO3	Fluo- ride F	Boron	S10-	TDS Total Evapl80% hardness Evapl05% 03	Total hardnes 0\$ CaCO ₃
Stream name and station number	station	numbe				NEW DIVED	C										
NEAR WESTMORLAND	ND					A L	Υ.				200						
	68	7.6	4807	196	107			0	549	695	1050	24	0.7	1.00	16	3078	930
11- 4-63				9.78	8.80	30.26	0.41		4.08	14.47	29.61	0.39				7857	
	53	7.3	5405	228	121		22	0	295	773	1365	21	0	0.98	14	3770	1067
1-8-64				11.38	9.95	38.26	0.56		4.84	16.09	38.49	0.34				3571	
,	57	7.5	4634	187	87		15	0	259	647	886	16	0 • 8	0.88	16	5664	825
3-11-64				9.33	7.15	26.22			4.25	13.47	24.99	0.26				2586	
	16	7.2	9675	235			21	0	286	817	1366	12.4	1.0	1.30	16	3752	1109
5-11-64				11.73	10.44	37.57			4.69	17.01	38.52	0.20				3601	
							•			1						1000	
7- 6-64	82	7 . 4	5685	229	124	38.70	28	0	264	805	1416	24	1.0	1.08	23	3946	1082
				19	17	63	1		7	27	65	0.03				3671	
- 0	86	7.7	5405	226	114		27	0	255	194	1350	22	1.0	1.20	18	4630	1034
1000				11.628	9.38	50.02	0.00		4.18	16.53	38.07	0.35				3519	
			,														
																	l

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES TABLE D-2

Anolyzed	by b		DWR	DMI	DWS	DWR	DW3	DWR
oxygen	Percent		75	0.2	6).	108	8	110
Dissolved oxygen	Ports per million		۵. ن	0.0	9:-	7.5	0. 4	· ·
	Phenol	65						
ar million	Turbidity	IV.	A 25	Λ.	160	Å	0	001
Constituents, in parts per million	NH4							
Constituent	Syndets						0	0.10
	P04	ALAMO RIVER	rved				C.12	0.12
Coliform	MPN/ml		62 24c small fish observed	62.2	70	399	50,472	540 240 5enic = 0.0
	Hd bi	number JARY	7.8 bettom; sm	00	7.6 Observed	7.5 served	7.4 isn observed	7.4
Gage ht.(ft)	Flow (cfs)	Stream name and station number AT ILTERNATIONAL BOUNDARY	0.3° 3.15 regetation on	0.27 1.59 Tsh observed	5-11-64. 0.58 1537 3.15 Clear; small fish ob	0.27 2.67 small rish obs	0.44 3.5. oam, small #3	5.67 5.67 540 burbid; little fram; ordenic = 6.0
Date	Remarks	Stream name AT INTERM	11-5-63 0930 Clear;	1-8-64 1120 Clear; f	5-11-64 1530 Clear; 5	>-11-64. 1510 Clear, \$1	1-7-c4 1485 3.425 3.425	. 1210 311 <i>C</i> htly

MINIERAL ANALE D-2 ACE WATER COLORADO RIVER BASIN DRAINAGE PROVINCE (X)

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
COLORADO RIVER BASIN DRAINAGE PROVINCE (X)

March Minos Mino		Temp		Specific conduct-	×	Mineral co	constituents	ë	por ts equivo	nien	millior per sactance	million			Mineral parts	constituents per million	fuents in	
3407 156 492 492 8 0 298 684 580 8 7 0 9 684 14,24 16,36 0.14 4.29 10.298 14,24 16,36 0.14 4.29 10.298 11.2 18 22844 10.2 1 39 0.20 1.3 0.2 1.	DATE SAMPLED	sampled in °F		_	Calcium	Magne- sium Mg	Sodium	Potas- sium K	Carbon- ate CO3	Bicar - bonate HCO ₃	Sulfate SO ₄	Chlo- ride Cl	Ni - trate NO ₃	Fluo- ride F	Boron	Sili- co Si02	TDS Evap1809C Evap1059C Computed	Total hardness caco ₃
3407 156 96 492 0 298 664 580 8*7 0*96 19 2244 4219 221 221 220 220 220 12 20 220	Stream name and	1	numbe			A	I AMO RI	VER				59						
8-64	AT INTERNATION	AL BOUN	IDARY															
5-63 7-76 7-70 21-29 0-20 4-88 14-24 16-36 0-14 16-36 0-14 16-36 0-14 16-36 0-14 16-36 0-14 16-36 0-14 16-36 0-16 1-12 16-296 18-296 18-26 18-40 23-69 0-16 1-12 16-296 1-12 650 10 0 39 884 840 0 0 1-12 18-296 1 2-26 18-26		69	7.5	3407	156	96	492	ω	0	298	684	580	8.7	6.0	0.86	19	2244	785
8-64	11- 5-63				7.78	7.90	21.39	8		4.88	14.24	16.36	0.14				2192	
8-64		59	7.7	4219	204	121	650	10	0	339	884	840	10	0 • 8	1.12	18	2985	1007
1-64	1-8-64				10.18	9.95	28.26	2		5.56	8 . 4	23.69	0.16				2906	
1-64 73 7-4 1599 107 45 19-13 0-20 4-75 14-64 14-78 0-08 1-64 80 7-8 2809 142 73 7-09 8-17 0-10 2-62 603 4-88 3 0-24 1857 8-64 84 7-5 3436 162 9-3 17-52 1-31 0-23 4-49 1		79	7 • 8		160	80	044		0	290	703		5		0.88	11	2153	729
1-64 80 7.8 2809 107 8.17 0.10 80 7.8 82809 1142 73 392 8 0 262 603 488 3 0.7 0.74 18 1951 7-64 84 7.5 3436 162 93 4.90 9 0 274 16.33 0.82 0.8 0.96 22 2330 8-64 85 3436 155 21.31 0.23 4.49 14.47 16.33 0.82 0.8 0.96 22 2330 8-64 86 7.5 3436 155 21.31 0.23 4.49 14.47 16.33 0.82 0.8 0.96 22 2330	3-11-64				7.98	6.58	19.13	N		4.75	14.64	14.78	0.08				2076	
1-64 80 7.8 2809 142 7.09 6.00 17.04 0.10 2.62 6.03 488 3 0.07 0.74 18 1951 7-64 84 7.5 3436 162 93 490 9 0 274 695 650 15 0.8 0.96 22 2330 8-64 84 7.5 3436 15 22 21 25 21 25 21 25 21 39 24.09 14.47 18.33 0.24 29 15.25 22 2330		73	7 . 4		107	45	188		0	212	417	181	2.0		0.25	16	1111	452
7-64 84 7.5 3436 162 2.03 17.04 0.23	5-11-64				5.34	3.70	8.17	•		3.47	200	30	0000				1065	
7-64 84 7.5 3436 162 93 490 9 0 274 695 650 15 8-64 84 7.5 3436 155 21.31 0.23 44.49 14.47 18.33 0.24 8-64 84 7.5 3436 155 21.31 0.23 4.49 14.47 18.33 0.24 8-64 8.08 7.65 21.31 0.23 4.49 14.47 18.33 0.24 12 22 72 72		80	7.8	2809	142	73	392	80	0	262	603	488	М	10.0	0.74	18	1951	655
8-64 84 7.5 3436 162 93 490 9 0 274 695 650 15 0.8 0.96 22 2330 8-64 8-64 8-08 7-65 21.31 0.23 12 12 13 1 16.33 0.24 12 2 12 1 16.33 0.24 13 2 12 1 16.33 0.24 14 2 14.47 16.33 0.24 15 2 2 2 2 3 3 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	7- 7-64				7.09	6.00	17.04	• 2		4.29	2.5	13.76	0.05				1857	
8-64 8-64 8-64 8-64 8-64 8-64 8-64 8-64		84	7.5	3436	162	63	760	6	0	274	669	650	15	0.8	96.0	22	2330	787
	79-8-6				8.08	7.65	21.31	0.23		4.49	14.41	18.33	0.24				2272	

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES TABLE D-2

Analyzed	by b		DWR	DWR	DWR	DWR	DWR	DWR
oxygen	Percent		8	106	92	87	115	500
Dissolved	Parts per million		8.2	12.0	4.6	7.4	5.6	10.1
	Phenoi							
r million	Turbidity	09	1	300	650	250	750	500
Constituents, in parts per million	NHA							
Constituent	Syndets							
	P04	ALAMO RIVER						
Coliform	MPH/mi		620 2400	620	790	2400	240	6200
	Field pH	on number	8.3	7.8	7.5	7.4	7.6	tr. L
Gage ht.(ft)	Flow (cfs)		769.63 1031 uurbid	1-8-64 769.20 1325 1319 Turbid; brownish color	769.80	769.85 691	769.63 696	9-7-64 1900 714 Turbid; ammic = 0.0
Date	Time	Stream name and stati	11-4-63 1230 Slightly	1-8-64 1325 Turbid; br	3-11-64 1050 Turbid	5-11-64 1450 Turbid	7-6-64 1315 Turbid	9-7-64 1900 Turbid; az

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TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

MINERAL ANALYSES OF SURFACE WATER
COLORADO RIVER BASIN DRAINAGE PROVINCE (X)

	Total hardness caco ₃		954	925	870	466	1047	: 76	
constituents in per million	TDS Evap1809C Evap1059C Computed		2608	2519	2389	2730	3026	2660	
constituen per million	Sili- co SiO ₂		12	13	14	Φ	15	9	
Mineral parts p	Boron		75.0	0.52	0.52	0.66	99.0	0.72	
	Fluo- ride F		6 • 0	7.0	6.0	7.00	0 • 8	9.0	
	Ni - trate No ₃		30	40	31 0.50	20 0 • 32	37 0.60	28 0 • 45 1	
million	Chlo- ride Cl	09	725 20.45 50	760	664 18•72 49	769	869	750	
per	Sulfate SO ₄		783	748 15.57	733	806 16.78 39	876 18.24 39	823 17•13 41	
parts per equivalents percent r	Bicar - bonate HCO ₃		3.67	3.72	3.64	251 4.11	239	3.56	
por ts equivo percer	Carbon- ate CO ₃		0	0	0	0	0	0	
ņ	Potas-	VER	100.26	0.28	0.28	14 0.36	13 0•33	0.28	
constituents	Sodium	ALAMO RIVER	515 22•39 54	535 23•26 55	483 21.00 54	534 23.22 53	588 25.57 55	525 22.83 54	
Mineral cor	Magne-	A .	125 10•28 25	9.05	7.90	118	10.44	9.79	
×	Colcium		176 8.78 21	189	190	204 10.18 23	210	181	
Specific conduct-	micro- mhos at 25°C)		3850	3731	3465	3858	4214	3817	
,	Hd	number	7 • 8	7.5	7.4	7.4	7.5	7.6	
Тетр	when sampled		69	20	58	75	81	60	
	DATE SAMPLED	Stream name and station NEAR CALIPATRIA	11- 4-63	1-8-64	3-11-64	5-11-64	7- 6-64	49-1 -6	

MINERAL ANALYSES OF SURFACE WATER FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES TABLE D-2

Anolyzed	by b			DWR	DWR	DWR	DWR	DWR	DWR
oxygen	Percent			103	26	102	87	93	8
Dissolved	Ports per million			8.6	9.8	10.0	8.5	0.8	9.6
	Phenol								
r million	Turbidity	89		A 25	< 25	₹ 52	A 25	₹ 25	₹ V
Constituents, in parts per million	NH4								
Constituent	Syndets	VER							
	P04	WHITEWATER RIVER							
Celiferne	MPH/ml	M		1.3	40.45	<0.45 <0.45	2.3	13	045 045
	Field pH	number		7.4	O. 83	9.7	7.6	7.3	7.4
Gage ht.(ft)	Flow (cfs)	Stream name and station number	WATER	1.21 30 Est.	1.36 45 Est.	1.33	1.16	1.52 50 Est.	1.40
Date	Time	Stream name	NUCLE WHITEWATER	11-5-63 1630 Very clear	1-10-64 0900 Clear	3-14-64 1520 Clear	5-10-64 1612 Clear	7-6-64 0800 Clear	9-7-64 1505 Clear

MINITAL ANALYSTS OF SURFACE WATCH

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

	Total hardness CaCO ₃		214	201	194	200	196	9 2
lion	Evap180°C Evap180°C Computed		279	270	262	275	258	253
constituents per million	Sili-		15	1 7	1.7	13	17	1.7
Mineral constituent parts per million	Boron		0.09	0	0.02	0	70.0	. 0
	Fluo-		\$ 0	0	1 • 1	0 • I	1.0	© 0 ent
	trote NO3		1.0	2.0	2.0	1.6	20.03	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
miltion	Chlo- ride Cl	68	0.14	0.14	0.11	5 0 14 3	0.14	0.11
parts per million equivalents per million percent reactance value	Sulfate SO ₄		42 0.87 18	43	410.85	41 0.85 17	41 0.85 18	0.0000000000000000000000000000000000000
ivalents	Bicar - bonate HCO ₃		3.72	234	233	3.88	222 3.64 78	3.56
equive percer	Carbon- ote CO3	<u>~</u>	0	С	0	С	0	c
ć	Potas- sium K	ER RIVER	0.13	5 0 0 3	0.13	0.13	0.10	0.00
constituents	Sodium	WHITEWATER	15 0.65	16 0.70	16 0.70 15	16 0.70	15 0.65	0.65
Mineral co	Magnet Sium Mg	M.	18 1.48 29	1.23	12 0.99	1.23	1.23	300
Σ	Calcium		2.79	5.6 7.79 5.8	5.89	5.94 5.94 5.94	2.69	0 4 4 0 8 C 4
Specific conduct-	, 0		467	424	439	451	428	4 12
	Hd	number	7.6	7.9	0 • 8	7 . 8	7 • 8	
Temp	sampled In o F	1	65	9	62	65	74	999
	DAIE SAMPLED	Stream name and station NEAR WHITEWATER	11- 5-63	1-10-64	3-14-64	5-10-64	7- 6-64	7-64

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES TABLE D-2

Analyzed	by b		DVAR	DWIR	DWR	DWR	DWR	DWR
oxygen	Percent		141	159	110	169	35	2
Dissolved oxygen	Parts per million		12.0	16.8	10.4	14.6	&. (3	ထု ထိ
	Phenol							
r million	Turbidity	68A	1	95	100	₹ ₹	∆	Λ 29
Constituents, in parts per million	NH4							
Constituent	Syndets							
	PO4	SALTON SEA						
Coliferm	MPN/mi	62	() (observed	9.0	2.3 < 0.45 i,0 mph	e. c.	8	m.n.
1	rield pri	number	6.5 Jarge Flob	† *::	50	∂ 3 ¢_	7.0	rved
Gage ht.(ft)	Flow (cfs)	Stream name and station number AT STATE PARK	None Sea Aurbis; grim	1-9-64 None 1350 Sea Slightly urbid; gring	2-16-64. None '.2 1400 Sea Silgarly turbid; high winde 50	None Sea urbid	lione Jea ine odor	1800 Sea Grimy; small fish observed
Date	Remarks	Stream name on AT STATE PARK	11-5-63 1350 	1-9-64 1350 Slightly	3-12-64 1400 Ulignelly	5-10-64 Honce 1830 See Slightly turbid	7-6-64, Rene 1010 Sea Clear; saline odor	9-7-64 1800 Grimy; sma

(X) HONIVORD BOX MIXED BRIDGE COXOC COX

TABLE D-2 MINEHAL ANALYSES OF SURFACE WATER

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

	Total hardness caco ₃		6277	7509	605.	6106	6161	5.5
constituents in per million	Evapl80°C hordness Evapl05°C caCO3		34156 6277	34375	33315 6055	32514	34471	0 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
constituent per million	S:11- co S:0 ₂		C	4	-	7	~	~
Mineral parts p	Boron		7.10	7.80	7° RO	7.70	3.8	9
	Fluo- ride F		ω •	°.	~ · ·	7 . 5	e e	9 . 7
	Ni – trate NO ₃		12 0 • 19	7.4	1.2	17 0 0 2 2 7	0.15	00.00.16
million	Chlo- ride Cl	68A	13750 387°75	14100 397.62 72	13750 387.75	13732 387.24	13910	14050 396.21 72
millio per ctance	Sulfate SO ₄		7330 13750 152.61 387.75	7262 151-19 27	7139	7114	7353 153.09 28	7400 154.07 28
parts per equivalents percent rea	Bicar - bonate HCO ₃		3.06	173	3.26	246	3.11	2.84
par ts equiva percen	Carbon- ate CO ₃		0	24	31	0	0	0
Ë	Potas - sıum K	SEA	3.68	, 160 4.09	3.89	154	154 3.94	165
constituents	Sodium	SALTON S	9560 415.67 76	9950	9600	9576	9680	9800
Mineral co	Magne- sium Mg	0,	1058 87.01	101083.06	986	1013	1030	1080 88.82 16
Σ	Colcium		38.42	38.72	39.92	38.72	38.42	37 - 63 4
Specific conduct-	mhos at 25°C)		00165	40650	38595	37750	4-)048	40160
0, 0	Hd	umber	° ° °		α	7 . 3	7 0	° .
Temp	when sampled in °F	station number	7.5	95	2	74	9	φ π
	DATE SAMPLED	Stream name and s	11- 5-63	1- 9-64	3-12-64	5-10-64	7- 6-64	49-1

TABLE D-2

FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES MINERAL ANALYSES OF SURFACE WATER

Analyzed	by b			DWK		DAR	DMR	DWIN	CANE
oxygen	Percent			93	101.	170	108	96)	त
Dissolved oxygen	Parts per million			3. 2.	ئد ق.	o. G.	4	8.7.	~·
	Phenol								
r million	Turbidity	68B		4 1	2	290	î.	5). T	Occi
Constituents, in parts per million	NH4		,						
Constituent	Syndets	TVDK		0.1				1,171	
	P04	WILLTHAMATER RIVIN				ä		0,00	
Coliforma	MPN/ml			05. 9	080	es (30 moughout wither	10	000f 3	9.0 0.0
:	Field pH	number		9:0	17	7.5 Deat'm; to		ું સંત્રો	1.7
Gage ht.(ft)	Flow (cfs)	Stream name and station number		Loo ast.	Tome 100 Est.	2-L -Ot arms 1/L to the met. deng tangs vegetation	Lone Look & Co.	0925 150 met.	Estate To read.
Dote	Time	Stream name	NEAR MECCA	17 = -5.5 17.65 (Arrected		7-1-04 1-1-7 Geografia	2+15 3+15 aurbs.d	, -t -t.l. 0925 Turbid;	oz.i.

MINIMAL ANALYSES DESCRIPCE WATER
(C) CHARLO REVER RANGE NORMER OF SURFIXED BENCHMAN

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
COLORADO RIVER BASIN DRAINAGE PROVINCE (X)

ride co Evopiso	1.008 23 1.000 22 23	1.06 23 23 5.02 1.00 20 20 5.1	1.08 5.02 1.08 2.3 1.00 2.0 2.0 1.00 2.
	3 3 9	S & S S	6 6 6 4 6 5 7 4 4 5 C
00.	88.0 0 .0 0 .0	80 80 70 30 80 80 40 40 80 80	
	957 19.92 49 900 18.74	957 19,92 49 900 18,74 19,86 19,86 913	19,957 19,92 18,74 19,86 19,86 19,01 50 830 17,28 913 19,01
	5.857 5.857 0 351 5.75		
RIVER			
ATER R	• •		
WHITEWATER 605	26.	26 26 26 25	
55			
173	164	8 . 53 . 8 . 154 . 8 . 53 . 7 . 53 . 7	8 . 64 . 7 . 160 . 7
3804	3425	3425	3406 3406 3356
8 • 2	8	8 8 7	8 8 7 7 7 • • • • • • • • • • • • • • • • •
75	61	68 76	68 7 7 88 72
NEAR MECCA 75 8*2	1- 9-64	3-12-64	1- 9-64 3-12-64 7- 6-54 7- 6-54

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES

SANTA ANA DRAINAGE PROVINCE (Y)

Date	Goge ht. (ft)		Collform		Constituent	Constituents, in parts per million	er million		Dissolved	oxygen	Analyzed
Time	Flow (cfs)	Field pH	MPN/ml	PO4	Syndets	NH4	Turbidity	Phenol	Ports per million	Percent	by b
Stream name and stat	e and station	ion number		WARK CREEK				50B			
10-1-63	10-1-63 None 7.6 6.2	9.7	6.8			1.9	< 25		6.7	87.94	DWT?
Composite;	onmples take	a at 0730, 1	145, and 160) hours					4.8	9	
11-5-63 Composite;	11-5-63 None 7.4 Composite; snamples taken at 0725,		6.2 1235, and 1600	27 D hours	2.72	7.0	100		7.2	47 89 76	DWR
12-3-53 Composite;	12-3-63 None 240 27 6 est Composite; gaumples taken 0735, 1209, and 1530 hours	 n 0735, 1209	240 , and 1530 hp	27 purs	0.9	9.5	90		7.5	74 79 81	DWR
1-3-64 Composite;	1-3-64 None 7.4 G est. Composite; samples taken at OhOO,	7.4 a at 0400, 1	23 1715, and 1930	29 bours	3.28	6.5	75		7.9	883	DWR
2-3-64 Composite;	None samples taken	7.3 at 1145,	13 1/30, and 1(CD	33 O hours	14.3	3.6	4 25		89.00.00	87 78 80	DWIR
3-5-64 	3-5-64 None 7.5 700 + 31 Composite; gamples taken at 0725,1200, and 1530 hours	7.5 n at 0725,13	700 + DO, and 1530	31 hours	3.52	18	100		6.3 6.8	62 79 73	DVIR
4-9-64 Composite;	h-9-64 None 7.3 h est. Composite; gamples taken at 0730,		(20 1230, and 161D	28 D hours	0.0	6.5	425		6.8 7.1 5.8	73 65	DWR
5-7-64 1100 Slightly tu	1100 9 est. Slightly turbid; some f	7.2 a	B100	61	3.20	10	100		7.8	82	DWR

MINERAL ANALYTIS OF BUREACT WATER

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

SANTA ANA DRAINAGE PROVINCE (Y)

	Temp		Specific conduct-	×	Mineral co	constituents	Ë	por	ports per equivalents percent re	millio per eactonce	million			Mineral	constituent per million	constituents in per million	
DATE SAMPLED	when sompled	Hd	(micro- mhos at 25°C)	Colcium	Mogne- sium Mg	S od i um	Potas X	Carbon- ate CO3	Bicar - bonote HCO3	Sulfate SO ₄	Chio-	trate NO3	Fluo- ride	Boron	Sili-	Evaple99 computed	Total hardnes
Stream name and AT COLTON	station	number			×	WARM CREEK	Ä				508						
13- 1-63	75	7 . 3	9006	2.20	20 1064	106	13	0	183 3.00	68 1,42 17	105	74 1 • 19 14	6.0	0 • 48	3.5	552	192
11- 5-63	63	7.5	1022	2.59	19 19 16	122 5 30 54	150.38	0	176 2.88 30	1.60	134 3.78 39	1.40	1 • 1	0.56	30	630	208
12- 3-63	65	7 • 3	1040	2.05	1.97	5.22	150.38	0	256	1.37	3.44	69 1.11 11	1 • 1	0.50	0 4	610	201
1-3-64	1	7 • 1	955	50 2.50	1.64	112	150.38	0	161 2.64 29	76 1.58	3.30	104	1 • 0	0.56	58	630	201
2-3-64	79	7.0	822	3.04	1.07	3.70	0.38	0	178 2.92 35	1.56	1.95	114	1 • 0	74.0	7 2	540	206
79-6-2	999	7 . 5	1154	3.29	10.40	125	16 0.41	0	320	71 1.48 13	143	32 0.52 5	1.0	0.62	5.3	654	235
79-6 -7	19	7 . 4	362	2.30	20 1.64 18	115 5.00 54	14 0 • 36	0	3.34	1.44	3.72	64 1•03 11	1 • 0	0.68	5,	590	197
5- 7-64	59	7 • 1	696	2.05	1.89	114	14 0 • 36	0	254	1.39	124 3.50 36	35 0 • 50		99.0		615	197

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES TABLE D-2

Anolyzed	by b		IMG	DWF	TWO	DMT
oxygen	Percent		88 101 113	120	112	100
Dissolved	Ports per million		8.8	8.3 10.0	4.68	9. 8
	Phenoi	50B			·	
r million	Turbidity		160	30		25
Constituents, in parts per million	NH4		2			Q
Constituents	Syndets	_	3.05	1.7	2.6	†. €
	PO4	WARM CREEK	4.75 530 hours	32 1600 hours	29 1545 hours	80
Collform	MPN/ml		230 4.75 1230, and 1530 hours	620 62 1200, and 1	0000 0000+ 145, and	4000
100		ion number	7.4 taken at 0745,	7.5 ken at 0730,	None 8 est. 7.4 7 amples taken at 0800, 1	7.3
Gage ht.(ft)	Flow (cfs)	and station	1-64 None	7-1-64 None 10 est. Composite; samples taken at	8-3-64 None 8 est. Composite; samples ta	None 6 est.
Date	Remarks	Stream name and stat	Composite	7-1-64 Composite	8-3-64 Composite	9-3-64 0945 Slightly turbid

MINERAL ANALYSES OF SURFACE WATER

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TABLE D-2 MINERAL ANALYSES OF SURFACE WATER

MINERAL ANALYSES OF SURFACE WATER SANTA ANA DRAINAGE PROVINCE (Y)

L	Sio	Sili- co Evapl800 Si02 Computed	Sion	S:02	2 8 8 2 8 8 9 8 9 9 9 9 9 9 9 9 9 9 9 9	29 28 28 29 29	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Sili-				0.8	0.38	0.00	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
rate NO ₃	,			78 1.26 17	78 1.26 17 94 1.52	78 1.26 17 94 1.52 100 1.61	78 1.26 17 94 1.52 100 100 1.61 21 21 50
Chlo- ride Cl	-	50B	508				
nn- Bicar - Sulfate Chlo- bonate SO4 Cl				186 3.05 1.29 40			
Carbon- ote CO3 H				0			0 0 0
o to to a s		EEK	EEK	EEK 0.36	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	EEK 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	EEK 0 0 0 36 0 313 0 0 33 0 0 33 0 0 33 0 0 33 0 0 3 13
Sodium		WARM CRE	WARM CREEK	MARM CRE 3.22 3.43	MARM CRE 3,22 4,33 114 4,966 555	MARM CRE 3-22 3-22 114 4-96 4-96 55 7 55 8 3-78	MARM CRE 3-22 4-36 4-96 7-96 7-96 7-96 7-96 7-96 7-96 7-96 7
Magner Sum Magner		_		1.81	22 1.81 24 1.56	1.81 1.81 1.84 1.95 1.195 1.196 1.196 1.196	1.81 2.4 2.4 1.956 1.7 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0
Colcium	1				2,10		
ance (micro- mhos at 25°C)		- La	L au	778			
ī	7	number					
when sampled	-						
DATE SAMPLED		som name and	COLTON	COLTON 6- 1-64	COLTON COLTON 6- 1-64 7- 1-64	COLTON COLTON 7-1-64 7-1-64 8-3-64	AT COLTON 6- 1-64 7- 1-64 8- 3-64 9- 3-64

MINERAL ANALYSES OF SURFACE WATER FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES TABLE D-2

SANTA ANA DRAINAGE PROVINCE (Y)

Anolyzed	by b		DWIR	DWIR	DWR	DWR	DWR	DWIR	DWR	DWR
oxygen	Percent		107	150	35	35	66	83	62	5).
Dissolved oxygen	Parts per million		9.6	3.6	0.9	8.6	3.6	8.34	8.0	8.4
	Phenoi									
r million	Turbidity	51	v E	30	\$	∀	Ž.	33	₹	V
Constituents, in parts per million	NHA									
Constituent	Syndets	IVER	70°0	0.08	0.08		0.08		9.05	· 0
	₽04	SANTA ANA RIVER	0.1	0.22	0.20		0.14		0*140	96.0
Coliforma	MPN/m1		230	130	23 24.5	23	240	02.50	130	, 700.
:	He bie	number	0.8	8.2 runoff	7.7 ved; some fqan	7.6 observed	7.8	9.7.	7.6	7.6
Gage ht.(ft)	Flow (cfs)	a station	1.23	11-7-63 1.23 1005 12 Slightly turbid; storm	12-6-63 1.09 1105 20 Clear; small fish obser	1-14-64 1.07 1650 22 Clear; fish and insects	1.14	1.15 20 stun].12 24 le foam	1,114
Date	Time	Stream name on NEAR ARLINGTON	10-3-63 1520 Clear	11-7-63 1005 Slightly tu	12-6-63 1105 Clear; smal	1-14-64 1650 Clear; fish	2-7-64 1150 Clear	3-5-64 1.15 1000 20 Clear; no foum	1.18 1450 24 Clear; little from	9-8-64 0939 Clear; foam

CAL TONINOGO PROMINOS ONO OTROS

MINERAL ANALYBES OF BUREACE WATER

TABLE D-2 MINERAL ANALYSES OF SURFACE WATER

MINERAL ANALYSES OF SURFACE WATER SANTA ANA DRAINAGE PROVINCE (Y)

Month Mont	1	Temp		Specific conduct-	2	Mineral co	constituents	.c	por ts equivo percer	ports per equivalents percent r	million per sactance	million			Mineral parts p	constituent per million	constituents in	
## SANTA ANA RIVER 70 8.0 1050 1114 25 7.6 3.35 0.13 0.13 0.13 10.1 62 7.9 1066 1117 25 7.76 3.35 0.13 0.13 0.344 116 10.1 62 7.8 1068 1107 2.5 3.35 0.13 0.13 0.13 0.12 0.10 60 8.1 1022 1114 2.5 3.39 0.13 0.13 0.13 0.10 60 8.0 1027 116 2.1 3.39 0.13 0.13 0.10 60 8.0 1027 116 2.1 3.39 0.13 0.13 0.10 60 8.0 1028 117 2.7 88 0.13 0.13 0.10 60 8.0 1018 110 2.2 3.48 0.10 60 8.0 1018 110 2.2 3.48 0.10 60 8.0 1018 110 2.2 3.48 0.13 0.13 0.10 60 8.0 1018 110 2.2 3.48 0.10 60 8.0 1018 110 2.2 3.48 0.10 60 8.0 1018 110 2.2 3.48 0.10 60 8.0 1018 110 2.2 3.48 0.10 60 8.0 1018 110 2.2 3.48 0.10 60 8.0 1018 110 2.2 3.48 0.10 60 8.0 1018 110 2.2 3.48 0.10 60 8.0 1018 110 2.2 3.48 0.10 60 8.0 1018 110 2.2 3.48 0.10 60 8.0 1018 110 2.2 3.48 0.10 60 8.0 1018 110 2.2 3.48 0.10 60 8.0 1018 110 2.2 3.48 0.10 60 8.0 1018 110 2.2 3.88 0.10 60 8.0 1018 110 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.	DAIE SAMPLED	sompled In ^o F		_	Calcium	Magne-	Sodium	Potas-		Bicar - bonate HCO ₃		Chlo- ride	rote NO3	Fluor	Boron	Sidir- ca SiO ₂	TOS Evap1809C Evap1059C Computed	Total hardness CaCO ₃
70 8.0 1050 114 25 76 5.56 3.30 0.13 5.47 2.42 2.82 2.85 2.85 2.85 3.30 0.13 5.47 2.42 2.85 2.85 2.85 3.30 0.13 5.47 2.42 2.85 2.85 2.85 3.42 1.01 3.85 0.13 5.61 2.50 2.85 2.85 2.85 3.35 0.13 5.61 2.50 2.85 2.85 2.85 3.85 0.13 5.61 2.50 2.86 2.85 3.85 0.13 5.72 2.50 2.86 2.85 3.85 0.13 5.72 2.50 2.86 2.86 2.86 3.86 <td>Stream name and</td> <td>1</td> <td>numbe</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>0</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Stream name and	1	numbe						0									
3-63	NEAR ARLINGTON								۷.			10						
3-63 6-63 6-64 6-65 6-72 6-73 6-74 6-74 6-74 6-74 6-74 6-76 6-76 6-76 6-76 6-76 6-76 6-76 6-76 6-76		70	00	10	114	25	76	Z	0	334	116	101	30	0 0	0.14	25	681	8
7-63 62 7.9 1066 1117 2.25 77 5 0.13 0 342 120 101 6-63 65 7.8 1068 107 31 78 5.9 0.13 5.61 2.50 2.85 6-64 60 8-1 1022 114 2.25 3.39 0.13 5.67 2.50 2.88 7-64 63 8.0 1027 116 2.22 3.39 0.13 5.72 2.56 2.88 6-64 69 8.0 1018 110 2.27 3.48 0.13 5.72 2.56 2.88 8-64 59 8.0 1018 110 2.27 3.48 0.13 5.72 2.56 2.88 8-64 51 7.5 1018 110 2.29 3.48 0.13 5.49 2.55 2.88 8-64 51 7.5 1018 115 2.2 3.48 0.13 5.49 2.55 2.88 8-64 51 7.5 1018 115 2.2 3.48 0.13 5.44 2.44 2.48 2.88	10- 3-63				5.69	2.06	· ~	•		5.47	2.42	2.85	0.48			1	657	
6-63 62 7-8 1068 107 31 78 5-61 2-50 2-85 6-63 6-63 60 8-1 1022 1107 22 3-39 0-13 5-61 2-50 2-85 6-63 6-63 60 8-1 1022 114 2-52 3-39 0-13 5-62 2-50 2-88 6-64 69 8-0 1027 116 2-12 3-48 0-13 5-72 2-56 2-88 6-64 69 8-0 1018 110 2-22 3-48 0-13 5-72 2-56 2-88 6-64 69 8-0 1018 110 2-22 3-48 0-13 5-72 2-56 2-88 6-64 69 8-0 1018 110 2-22 3-48 0-13 5-57 2-56 2-88 6-64 69 8-0 1018 110 2-22 3-48 0-13 5-57 2-56 2-88 6-64 69 8-0 1018 110 2-22 3-48 0-13 5-57 2-56 2-88 6-64 69 8-0 1018 110 2-22 3-48 0-13 5-57 2-56 2-88 6-64 69 8-0 1018 110 2-22 3-48 0-13 5-57 2-56 2-88 6-64 69 8-0 1018 110 2-22 3-48 0-13 5-57 2-56 2-88 6-64 69 8-0 1018 110 2-22 2-26 2-28 6-25 2-26 2-26 2-26 2-26 2-26 2-26 2-26		62	7.9	1066	117	25	7		0	345	120	101	23	0 . 8	0.14	26	670	395
6-63 62 7.8 1068 107 31 78 5.39 0.13 0.13 0.102 1102 1104 2.55 3.39 0.13 5.72 2.50 2.50 2.58 4-64 60 8.1 1022 114 2.22 3.39 0.13 5.67 2.50 2.93 7.64 5.9 1027 116 2.15 116 2.15 116 2.25 3.39 0.13 0.13 1.15 2.2 88 0.13 0.13 0.13 0.13 0.13 0.13 0.13 0.13	11- 7-63				5.84	2.06	60			5.61	2.50	2.85	0.37				663	
6-63 60 8-1 1022 114 2-55 3-39 0-13 5-72 2-50 2-88 6 6 8-1 1022 114 27 2-22 3-39 0-13 5-67 2-50 2-93 6 6 8-1 1022 114 27 3-9 8 0-13 5-67 2-50 2-93 6 6 8-0 1027 116 2-1 80 8-0 1 3-48 0-13 5-64 5-64 5-64 5-64 5-64 5-64 5-64 5-64		62	7.8	1068	107	31			0	349	120	102	21	0.5	0.14	35	649	395
4-64 60 8-1 1022 114 27 78 5.67 346 120 104 7-64 63 8-0 1027 116 2.22 3.39 0.13 5.67 2.50 2.93 7-64 63 8-0 1027 116 21 3.48 0.13 5.72 2.56 2.93 5-64 59 7-9 1058 117 27 80 4 0.43 0.49 2.56 2.86 5-64 59 7-9 1058 117 27 80 4 0.49 5.72 2.56 2.88 5-64 5-84 2.22 3.48 0.10 0.348 121 102 6-64 69 8.0 10.08 110 2.49 2.22 3.48 0.10 2.52 2.88 6-64 69 8.0 10.08 110 2.48 2.49 2.50 2.52 2.88 6-64 69	12- 6-63				5.34	N 24		•		5.72	2.50	2.88	0.34				671	
4-64 63 8-0 1027 116 21 80 6.13 5.67 2.50 2.93 7-64 63 8-0 1027 116 21 80 6.13 5.72 2.56 2.88 5-64 69 8-0 1018 110 29 2.38 3.48 0.13 5.57 2.55 2.88 6-64 69 8-0 1018 110 29 80 6.13 6.57 2.55 2.88 8-64 8-64 51 7.5 1013 115 2.6 2.14 3.22 0.13 5.44 2.14 2.44 2.14 2.44 2.28		09	8 • 1	102	114	27	78	5	0	346	120	104	23	0.7	0.12	25	695	968
7-64 63 8.0 1027 116 21 80 5.5 0 349 123 102 5-64 59 8.0 1018 110 22 80 80 1 1 2 2 2 80 6-64 69 8.0 1018 110 22 80 80 1 2 3 40 120 6-64 51 7.5 1013 115 22 80 1 1 2 2 2 2 80 8-64 51 7.5 1013 115 22 80 1 1 2 2 2 2 2 2 2 2 2 2 2 2 3 3 3 3 3 3	1-14-64				5.69	2.22	3.39	0.13		5.67	2.50	2.93	0.37			J		
7-64 63 8.0 1027 116 21 80 5.5 0 349 123 102 5-64 59 7.9 1058 117 27 80 44 0.10 5.72 2.56 2.88 6-64 69 8.0 1018 110 29 80 5.1 5.57 2.55 2.88 8-64 51 7.5 1013 115 2.6 7.7 5.0 340 117 102 8-64 51 7.5 1013 115 2.1 5.2 0.13 5.40 5.40 2.28 8-64 51 7.5 1013 115 2.1 5.2 0.13 5.40 5.40 2.28					20	19		-		64	22	26	3				199	
5-64 59 7.9 1058 117 27 80 4 0.13 5.72 2.56 2.88 5-64 59 8.0 1018 110 29 80 5 0.13 5.72 2.56 2.88 5-64 69 8.0 1018 110 29 80 5 0 340 120 102 5-64 5.49 2.38 3.48 0.13 5.49 2.38 3.48 0.13 5.49 2.38 3.48 0.13 5.49 2.38 5.49 2.49 2.88	f	63	8.0	102	116	21			0	349	123	102	21	0.8	0.14	25	069	376
5-64 59 7.9 1058 117 27 80 44 0 348 121 102 6-64 69 8.0 1018 110 29 80 5 0 340 120 6-64 51 7.5 1013 115 26 74 3.22 0.13 5.44 2.44 2.88 8-64 51 7.5 1013 115 26 74 3.22 0.13 5.44 2.44 2.88	40-1-7				5.79	1.73		•		5.72	2.56	2.88	0.34				999	
6-64 6-64		59	7.9	1058	117	2	80		0	348	121	102	45	1.0	0.16	36	677	403
6-64 69 8.0 1018 110 29 80 5 0 340 120 102 102 102 102 102 102 103 10 103 103 103 103 103 103 103 103	3- 5-64				5.84	.2	3.48	•]		5.70	2.52	2.88	0.73				769	
6-64 51 7.5 1013 115 26 74 5 0.13 5.67 2.50 2.88 8 8-64 51 7.5 1013 115 2.81 3.22 0.13 5.44 2.88 51 7.5 51		69	8.0	-	110	59	80	5	0	340	120	102	24	9.0	0.16	25	099	394
8-64 51 7.5 1013 115 26 74 5 0 332 117 102 102 2.14 2.14 3.22 0.13 5.44 2.48 2.88	79-9-4				5.49	2.38	3.48	-		5.57	2.50	2.88	0.39				4	
8-64 5.74 2.14 3.22 0.13 5.44 2.48 2.88 2.8		51	7.5	1013	115	26	74	S	0	332	117	102	12.4	7 • 0	0.14	29	707	394
19 29 1 50 22 2	5- 8-64				5.74	2.14	3.22	-		47 .	2.44	2.88	0.20					
					51	19	59	-		90	22	56	2				559	

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES

SANTA ANA DRAINAGE PROVINCE (Y)

Anolyzed	by b			DWR	DWR	DWR	DWIR
oxygen	Percent			97	93	26	102
Dissolved oxygen	Parts per million			g. 8.	0.6	0.8	6
	Phenol						
r million	Turbidity	15		ह्ये V	∆ 20	1	∆
Constituents, in parts per million	NHA						
Constituents	Syndets	ER		90.0		90.0	ŏ°°°°°°°°°°°°°°°°°°°°°°°°°°°°°°°°°°°°°
	PO4	SANTA ANA RIVER		5.06		90.0	†0°0
Coliforma	MPN/ml	733		ĕ	99	000/,	62 A 0.15
	He be	number		7.6	7.8	7.7	7.5
Gage ht.(ft)	Flow (cfs)	Stream name and station number	ron	1.13	1.12	2.36 16.7 foam	1.7
Dote	Time	Stream name	NEAR ARLINGTON	6-5-64 1250 Clear	7-14-64 1315 Clear	8-6-64 2.36 1215 16.7 Clear; some from	9-4-64 1005 Clear

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

SANTA ANA DRAINAGE PROVINCE (Y)

	Temp		Specific conduct-	2	Mineral constituents	nstituents	. <u>c</u>	por	parts per equivalents percent rea	million per petance	million			Mineral constituents parts per million	consti	fuents in	
DATE SAMPLED	when sompled in o F	Hd	ance (micro- mhos at 25°C)	Calcium	Magne- stum Mg	Sodium	Potas - Sium K	Carbon- ate CO ₃	Bicar - bonate HCO ₃	Sulfate SO ₄	Chto-	rote NO3	Fluo-	Boron	Sili- co SiO ₂ :	Sili- EvapleO'C hardness co EvaploSeC oss SiO2 Computed CaCO3	Total hardness CaCO ₃
Stream name and station		number				SANTA ANA BIVEB	A P I VE				5						
NEAR ARLINGTON							N IVI W				10						
9-5-64	69	7.9	1006	116 5.79 52	2.14	3.00	0.13	0	330	119 2.48	2.79	22 0 • 35	0 • 7	0 1 3	2 2	697	347
7-14-64	69	7.6	1010	5.59	2.06	3.13	0.10	0	327	2.44	101 2.85 26	45 0 • 35	9.0	0.12	52	699	382
79-9 -8	73	7.2	1010	5.69	1.89	3.22	0.20	0	305	2.39	2.85	42	1 • 2	0.14	27	713	319
79-7 -6	79	7 • 8	1015	106	2.38	3.04	0.13	0	320 5.24 48	2.44	102 2.88 26	23 0.37	0 • 7	0.14	26	690	384

TABLE D-2 MINERAL ANALYSES OF SURFACE WATER

MINERAL ANALYSES OF SURFACE WATER FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES TABLE D-2 SA

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Analyze	by b			DWR	DWR	DWR	DWR	DWR	DWR	DWR	DWR						
oxygen	Percent			96	86	71	48	91	98	98	105						
Dissolved	Ports per million			8.8	8.7	7.8	8.6	9.2	8.8	8.0	φ.						
	Phenol	51A					0.61										
er militon	Turbidity	5		A 255	35	A 25	A 25	A 255	33	4 25	050						
Constituents, in parts per million	NH4																
Constituen	Syndets	LVER		44.0	0.32	0.34	0.56	0.41	0.38	02.0	6.0						
	₽Oď	SANTA ANA RIVER		3.0	r+.3	2.65	4.5	3.7	3.5 elds upstre	5.2	о°.						
Collforma	MPN/ml			620	7000	230	7000+	620	60 230 ding over fi	62 620	230 230 r upstream						
200		ion number								7.8	8.2 runoff	7.6	7.8	7.6	7.3 water sprea	7.4	7.4 cattle in water
Gage ht.(ft)	Flow (cfs)		O DAM	10-3-63 2.11 1400 3lightly turbid; foam	2.22 52 urbid; storm	2.17 44 urbid; foam	2.23	2.24 48 ie foam	3.5-64 2.26 7.3 60 3.5 1120 50 3.5 230 Slightly turbid; foom; water spreading over fields upstream	2.29 62 h foam	2.20 50 tle foam, ca						
Date	Remarks	Stream name and stat	BELOW PRADO DAM	10-3-63 1400 Slightly	11-7-63 1130 Slightly m	12-6-63 0925 Slightly	1-14-64 1810 Clear	2-7-64 2.24 1345 48 Clear; some foam	3-5-64 1120 Slightly t	1.30 62 1.30 62 Clear; much foam	5-8-64 2.20 1155 50 Clear; little foam,						

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

Name		Mineral constituents	ents in	900	parts per equivalents percent re	per	million			Mineral parts p	constituent per million	constituents in	
2. 26 4.98 0.6 0.343 123 125 29 0.09 0.35 35 708 2.14 4.26 0.15 5.62 2.56 3.53 0.047 0.9 0.34 708 2.22 4.26 0.15 5.61 2.56 3.54 0.27 0.9 0.34 27 600 2.22 4.43 0.20 3.42 125 129 0.0 0.34 27 600 2.22 4.48 0.15 0.364 125 129 0.7 0.34 27 600 2.22 4.48 0.15 0.364 125 129 0.7 0.32 700 2.22 4.48 0.15 2.66 2.20 0.7 0.35 3.6 700 2.22 4.57 0.15 5.64 2.66 3.61 0.27 0.35 715 2.23 4.35 0.15 5.88 2.66 3.61 0.27 0.7 0.36 775 2.24 4.35 0.15 2.52 2.29	Calcium Magn	1	or or s E		Bicar - bonate HCO ₃	Sulfate SO ₄	Chlo- ride	Ni - trate NO3	Fluo- ride	Boron	Sili- co SiO ₂	Evap 105°C Evap 105°C Computed	Total hardness CaCO ₃
2-26 98 6 0.15 5.62 2.56 3.53 0.47 0.9 0.35 35 708 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2				4									
2.16 98 6 0 343 123 125 29 0.9 0.35 35 708 2.18 3.26 0.15 4.6 2.56 3.53 0.47 0.89 0.35 35 708 2.22 102 0.8 0.342 123 122 17 0.8 0.34 27 690 2.22 4.43 0.20 342 125 129 0.27 0.34 27 690 2.63 4.48 0.15 0.364 125 129 0.27 0.7 0.34 27 690 2.63 4.46 0.26 3.64 0.25 3.64 0.19 0.7 0.32 34 700 2.22 4.46 0.15 0.364 126 3.65 0.35 0.35 0.35 0.35 0.35 0.35 0.35 0.35 0.35 0.36 0.36 0.35 0.37 0.36 0.36 0.36 0.36		SANIA	ANA	L K			SIA						
2.14 4.26 0.15 5.62 2.56 3.53 0.47 720 2.18 3.6 1 4.6 2.1 2.9 4 720 2.22 4.43 0.20 3.44 12.5 3.44 0.27 700 2.6.2 4.43 0.15 0.344 12.5 3.24 0.27 700 2.6.2 4.43 0.15 0.344 12.5 3.29 0.7 0.32 27 600 2.6.2 4.43 0.15 0.344 12.8 12.2 0.7 0.32 3.4 700 2.2.2 4.45 0.15 0.344 12.8 12.2 0.7 0.35 3.4 12.8 17.2 724 2.2.2 4.457 0.15 5.64 2.66 3.65 0.37 0.3 3.4 715 2.30 4.35 0.15 0.54 2.66 3.61 0.27 0.3 724 725 2.2 4.5		- 9			343	123	125	29	6.0	0.35	35	708	377
2.22 4.443 0.20 8 0.344 0.27 0.8 0.34 27 690 1.8 0.20 5.61 2.56 3.44 0.27 0.8 0.34 27 690 2.63 4.43 0.20 5.61 2.56 3.44 125 129 0.7 0.32 34 700 2.63 4.48 0.15 0.344 128 126 0.19 0.7 0.35 34 700 2.22 4.56 0.15 0.344 128 126 0.35 0.35 730 2.22 4.57 0.15 0.344 128 126 0.35 0.33 715 2.83 4.35 0.15 0.359 128 128 17 0.9 0.35 715 2.84 2.55 3.56 3.51 2.25 3.58 0.35 0.35 715 2.25 4.55 0.15 5.80 2.55 3.58 0.35	5.39 2.	.14	0.1		5.62	2.56	3.53	74.0				720	
2.22 4.443 0.20 5.61 2.56 3.44 0.27 700 3.2 4.43 0.22 4.7 2.2 2.9 2.2 70 700 2.63 4.48 0.15 3.64 125 129 12 0.7 0.32 34 700 2.23 4.48 0.15 0.344 128 126 20.2 0.7 0.35 25 730 2.22 4.657 0.15 0.344 128 126 20.2 0.7 0.35 25 730 2.22 4.657 0.15 0.354 128 17 0.9 0.35 715 2.30 4.35 0.15 0.359 128 122 0.27 0.44 37 707 2.22 4.45 2.56 3.51 0.25 3.58 0.35 715 2.22 4.55 0.15 4.7 2.1 2.2 3.58 0.35 704 707 <td>105</td> <td>7</td> <td></td> <td></td> <td>342</td> <td>123</td> <td>122</td> <td>17</td> <td>0 • 8</td> <td>0.34</td> <td></td> <td>9690</td> <td>373</td>	105	7			342	123	122	17	0 • 8	0.34		9690	373
2.63 4.448 0.15 0.364 125 129 0.19 0.7 0.932 34 700 2.22 4.488 0.15 0.344 128 126 0.019 0.7 0.35 25 724 2.22 4.57 0.15 0.344 128 126 20 0.7 0.35 25 730 2.22 4.57 0.15 0.354 128 126 0.35 0.35 715 2.82 100 .6 0.359 128 128 17 0.9 0.38 715 2.93 4.35 0.15 5.88 2.66 3.61 0.27 0.9 0.38 715 2.22 4.52 0.15 5.88 2.66 3.61 0.2 721 2.22 4.52 0.15 5.80 2.52 3.58 0.35 0.7 0.44 37 707 2.22 4.55 0.15 2.54 3.24 3.47	5.24 2.	.22 4.	3 0.2		5.61	2.56	3.44	N				700	
2.63 4.448 0.15 5.97 2.60 3.64 0.19 724 2.21 4.8 1 4.8 21 29 2 73 2.22 4.57 0.15 5.64 2.66 3.55 0.32 0.7 0.35 25 730 2.30 4.05 0.15 5.64 2.66 3.55 0.37 0.36 715 2.30 4.05 0.15 5.88 2.66 3.61 0.27 0.9 0.38 23 715 2.2 4.05 0.15 5.88 2.66 3.61 0.27 0.9 0.38 23 715 2.2 4.05 0.15 5.88 2.66 3.61 0.27 0.9 0.38 23 715 2.2 4.05 0.15 5.88 2.65 3.58 0.35 0.3 70 2.2 4.05 0.15 5.91 2.52 3.58 0.35 0.3 70	_	32			364	125	129	12	10.0	0.32	34	700	389
2.22 4.57 0.15 6 344 128 126 20 0.7 0.35 25 730 1.8 4.57 0.15 4.6 2.66 3.65 0.35 0.35 25 715 2.30 4.35 0.15 0.359 1.28 1.28 1.7 0.9 0.38 23 715 2.30 4.35 0.15 0.354 1.21 1.27 2.2 0.7 0.44 37 707 2.22 4.52 0.15 0.354 1.21 1.27 2.2 0.7 0.44 37 707 2.22 4.52 0.15 0.354 1.21 1.27 2.2 0.7 0.44 37 707 2.22 4.52 0.15 0.35 1.22 1.29 0.35 0.44 23 680 2.22 4.52 0.15 2.51 2.54 3.47 0.31 0.6 0.44 23 680 <	2	.63	0.1		5.97	.6	3.64	0.19				724	
2.22 4.55 0.15 5.64 2.66 3.55 0.32 715 2.30 4.35 0.15 4.6 2.2 2.9 3 715 2.30 4.35 0.15 5.88 2.66 3.61 0.27 0.9 0.38 2715 2.22 4.05 0.15 5.88 2.65 3.61 0.27 0.74 37 707 2.22 4.05 0.15 5.80 2.52 3.58 0.35 0.35 721 2.22 4.05 0.15 5.80 2.52 3.59 0.31 729 2.22 4.05 0.15 5.51 2.54 3.47 0.31 729 2.22 4.05 0.15 5.51 2.54 3.47 0.31 739 2.30 4.02 0.15 0.15 2.54 3.47 0.31 736 2.30 4.02 0.15 0.15 0.364 2.71 3.50 0.11		27			344	128	126	20	1.0	0.35	25	730	381
2.80 1.00 6 0.0 359 128 128 17 0.9 0.38 23 715 1.8 4.35 0.15 5.88 2.66 3.61 0.27 727 727 2.22 4.65 0.15 5.80 2.52 3.58 0.35 0.7 0.44 37 707 2.22 4.65 0.15 5.80 2.52 3.58 0.35 0.3 729 2.22 4.65 0.15 5.81 2.54 3.47 0.93 0.66 0.44 37 707 2.22 4.35 0.15 5.51 2.54 3.47 0.93 0.66 0.644 23 680 2.22 4.35 0.15 5.51 2.54 3.47 0.93 0.7 0.34 591 2.30 4.22 0.15 5.64 2.71 3.50 0.11 0.35 31 704 19 3.5 1 4.7	~	.22	0.1		5.64	2.66	3.55	60				715	
2.30 4.35 0.15 5.88 2.66 3.61 0.27 721 2.18 35 1 47 21 127 22 0.7 0.44 37 707 2.22 4.52 0.15 5.80 2.52 3.58 0.35 0.7 0.44 37 707 2.22 4.52 0.15 5.80 2.52 3.58 0.35 0.7 0.44 27 729 2.22 4.35 0.15 5.51 2.54 3.47 0.31 0.6 0.44 23 680 2.30 4.22 0.15 5.51 2.54 3.47 0.31 0.35 31 734 2.30 4.22 0.15 5.64 2.71 3.50 0.11 0.35 31 734 19 3.5 1 2.5 3.2 0.11 0.35 31 704	13	89			359	128	128	17	6.0	0.38	23	715	397
2.22 4.52 0.15 6 0.354 121 127 22 0.7 0.44 37 707 1.8 4.52 0.15 6.80 2.52 3.58 0.35 0.35 0.644 37 707 2.22 4.35 0.15 0.36 122 123 19 0.6 0.444 23 680 2.22 4.35 0.15 5.51 2.54 3.47 0.31 0.6 0.444 23 680 2.30 4.22 0.15 6 344 130 124 6.8 0.7 0.35 31 734 19 35 1 4.7 2.71 3.50 0.11 0.35 31 704	2	.30	0.1		5.88	2.66	3.61	N				721	
2.22 4.52 0.15 5.80 2.52 3.58 0.35 729 2.22 4.35 0.15 0.36 122 123 19 0.6 0.44 23 680 2.22 4.35 0.15 5.51 2.54 3.47 0.31 0.6 0.44 23 680 2.32 4.22 0.15 344 130 124 6.8 0.7 0.35 31 738 2.30 4.22 0.15 5.64 2.71 3.50 0.11 704 19 35 1 47 2.3 2.9 1 704	_	27			35	121	127	22		7440	37	707	386
2.22 4.35 0.15 6 0 336 122 123 19 0.6 0.44 23 680 19 0.15 0.15 5.51 2.54 3.47 0.31 69.31 691 691 2.30 4.22 0.15 6 0 344 130 124 6.68 0.7 0.35 31 736 19 0.00 344 2.71 3.50 0.11 736 704	7	.22	0.1		8 4	2.52	3.58	0.35				729	
2.22 4.35 0.15 5.51 2.54 3.47 0.31 2.8 97 6 0 344 130 124 6.8 0.7 0.35 31 738 2.30 4.22 0.15 5.64 2.71 3.50 0.11		27			336	2	123	19	9.0	77.0	23	680	373
2.30 4.22 0.15 5.64 2.71 3.50 0.11 736 704 704	7	.22	0.1		5.51	IS OI	3.47	0.31				691	
2.30 4.22 0.15 5.64 2.71 3.50 0.11 19 35 1 47 23 29 1		28			344	130	124	6 • 8	10.7	0.35	31	738	392
	5.54 2.	.30	0.1		2.64	2.71	3.50	0.11				704	

MINERAL ANALYSES OF SURFACE WATER

MINERAL ANALYSES OF SURFACE WATER FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES TABLE D-2

Analyzed	by b			DWR	DWR	DWR	DATR
oxygen	Percent			9.6	108	112	100
Dissolved oxygen	Ports per million			8.8	9.8	9.6	ω
	Phenoi						
r million	Turbidity	A16		04	04	ì	Δ ξ.)
Constituents, in parts per million	4HN						
Constituent	Syndets	ER		0.26	0.18	0.26	0.00
	PO4	SANTA ANA RIVER		1.6	48.0	0.91	1.4
Coliforma	MPN/ml	78		2400	60 230	1300	530
110 100		number		7.3	7.6 ers upstream	7.4	7.3
Gage ht.(ft)	Flow (cfs)	Stream name and station number	DAM	2.08 32 r; foam	7-14-64 1.96 7.6 1445 Clear; some from; swimmers upstream	1.94 20.8 Le foam	22 26
Dote	Remarks	Stream name	BELOW PRADO DAM	6-5-64 2.08 1140 32 Clear; silty; foam	7-14-64 1445 Clear; some	8-5-64 1.94 1120 20.8 Clear; little foam	9-4-64 1230 Clear

TABLE D-2

	-
ER	۲
WATER	CE
	> N
SURFACE	PROVINCE
OF S	ELI C)
	A
ANALYSES	DRAINAG
ALY	
A	ANA
AL	A
MINERAL	SANTA
	S

	Total hardness caco ₃		401	395	394	4 2 1
fuents in	TDS Evap1809C Evap1059C Computed		725	754	750	717
consti er mi	S(1)- c0 S(0)2		27	54	56	9
Mineral constituents parts per million	Boron		0.33	0.33	0.34	0 0 2 2
	Fluo- ride		9.0	7.00	7.00	• • •
	Ni - trate NO3		7 • 4 0 • 12	8 0•13	22 0 • 35	0.18
million	Chio- ride Ci	514	3.50	3.55	3.58	6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6
millior per eactonce	Sulfate SO ₄		122 2.54	137 2.85 23	129	2.15
parts per equivalents percent re	Bicar - bonote HCO ₃		372 6 • 10 50	347	356	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
ports equiva percen	Carbon- ote CO3	~	0	0	0	0
. <u>s</u>	Potas	A RIVE	0.15	0.13	0.13	0 • 1 3
nstituents	Sodium	SANTA ANA RIVER	94 4 09	92	95	98 4 17 33
Mineral constituents	Mogne- s-um Mo	S	2.22	2.30	2.14	0 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
W	Colcium		116 5.79	112 5.59	115	5,29
Specific conduct-	micro- mhos at 25°C)		1119	1125	1126	1133
	H	number	7.4	7.5	7.3	9 • 6
Temp	when sampled in °F		8 9	78	75	7.2
	DATE SAMPLED	Stream name and station BELOW PRADO DAM	9-6-64	7-14-64	8- 5-64	49-4

MINERAL ANALYSES OF SURFACE WATER FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES TABLE D-2

Analyzed	by b			DWR	DWR	DWR	DWR	DWR	DWR	DWR	DWR
oxygen	Percent			106	88	76	68	87	28	83	87
Dissolved oxygen	Ports per million			10.4	9.6	10.6	0.11	0.11	10.6	10.0	2.11
	Phenoi										
r million	Turbidity	51.8		A 25	₹ 25	№ 25	4 25	< 25	₹ 25	▲ 25	A
Constituents, in parts per million	NHA										
Constituents	Syndets	LVER		00.0						00.0	
	P04	SANTA ANA RIVER		0.0						00.0	
Coliforma	MPN/mi			23	13	1.3	91.0	2.30	% % % %	w.w.	13
10.00	E 0 0 0 1	number		7. 8	80	0.8	7.8	7.8	7.8	7.6	80
Gage ht.(ft)	Flow (cfs)	Streem name and station number	63	None 15	None ing	None 15	None 15	None 15	None 17	None 17 Le foam	None 80 est. flow
Dote	Remarks	Stream name	NEAR MENTONE	10=4-63 1400 Clear	11-6-63 N 1105 -	12-5-63 1310 Clear	1-14-64 1450 Clear	2-7-64 0930 Clear	3-6-64 1340 Clear	1050 17 1050 17 Clear; little foam	5-7-64 None 1305 80 est. Clear; high flow

SANTA ANA DRAINAGE PROVINCE (Y)

MINERAL ANALYSES OF SURFACE WATER

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

MINERAL ANALYSES OF SURFACE WATER SANTA ANA DRAINAGE PROVINCE (Y)

Miles Mile		Temp		Specific conduct-	2	Mineral co	constituents	Ë	ports equivo percer		million per sactance	million			Mineral constituents parts per million	constituent	fuents in	
62 8.4	DATE SAMPLED	when sompled in o F	D.H.	(micro- mhos at 25°C)	Colcium	Mogne- sium Mg	Sodius	Potas	Carbon- ate CO ₃	Bicar - bonote HCO ₃	Sulfate SO ₄	Chlo- ride	rote NO3	Fluo- ride F	Boron	Sili- co SiO ₂	TDS Evap1809C Evap1059C Computed	Total hardness caco ₃
\$ 8.4	Stream name and	4	numbe				4 4 7 14 4					0						
4-63	NEAR MENTONE					n	ANIA AN		×			218						
6-63		62	8.4	28	28		19	2	0	134	19		6.6		0.08	18	159	66
6-63	10- 4-63				1.40	50	800	0		2.20	0.40	0	0.16				172	
5-63 50 8.0 266 1.00 0.09 0.087 0.05		53	8.1	29	53	,	20	2 2	0	13	22	9	0.0	9.0	60.0	18	195	106
5-63	11-0-03				1.45	9.0	0.87	0.05		20	0.46	0.17					173	
4-64 4-7 4-64 4-64 4-64 4-7 4-64 4-64 4-64 4-7 4-64 4-7 4-64 4-7 4-64 4-7 4-64 4-7 4-64 4-7 4-7		20	8.0		20	12	20	2	0	146			1.0	9.0	90.0	59	155	100
43 8-2 257 29 6-49 0-83 0-05 0-139 15 6-83 0-17 0-17 0-17 0-17 0-17 0-17 0-16 0-17 0-16 0-16 0-16 0-16 0-16 0-16 0-16 0-17 155 176 176 176 0-16 0-16 0-16 0-16 0-16 0-16 0-16 0-16 177 177 177 177 178 178 1	12- 5-63				1.00	0.99	0.87	0.05		2.39	mm	N	0.02				178	
42 8*1 248 1.45 0.49 0.83 0.05 2.28 0.31 0.17 166 116 5 1*0 0*0 21 166 116 5 1*0 0*0 21 166 <td>;</td> <td>43</td> <td></td> <td>257</td> <td>59</td> <td>9</td> <td>19</td> <td></td> <td>0</td> <td>139</td> <td>grand</td> <td>9</td> <td>0</td> <td>0.5</td> <td>90.0</td> <td>20</td> <td>170</td> <td>16</td>	;	43		257	59	9	19		0	139	grand	9	0	0.5	90.0	20	170	16
42 8+1 248 1-26 7 19 0-05 0-05 0-146 0-63 0-146 0-05 1-0 0-06 21 1-0 0-146 0-05 1-0 1-0 0-06 2-13 0-05 0-146 0-03 0-14 0-02 1-0 0-06 2-15 0-05 0-13 1-16 0-02 1-0 0-06 19 1-69 45 8-0 221 2.25 0-66 0-78 0-05 0-05 0-05 0-05 0-05 0-06 0-06 19 145 45 8-0 221 1-25 0-46 0-65 0-05 0-06 0-06 0-06 19 145 41 7-6 212 2.26 0-05 0-05 0-06 0-06 0-06 19 135 41 7-6 212 22 0-06 0-07 0-07 0-07 0-06 19 135 41 1-25 0-03	1-14-64				1.45	0.49	0.83	0		2.28	m =	0.17					166	
44 7.88 247 25 0.584 0.833 0.014 0.02 11 5 1 169 11 5 1 169 145 169 146	r	42	8.1	248	26		19	2	0	146	-	5	1.0	9.0	90.0	21	155	76
44 7.8 247 25 8 18 2 0 131 16 8 1.00 0.55 0.06 19 145 45 8.0 221 2.5 0.66 0.78 0.05 2.15 0.33 0.23 0.23 0.02 15 <th< td=""><td>10-1-2</td><td></td><td></td><td></td><td>1.30</td><td>00</td><td>30</td><td>0.02</td><td></td><td>2.39</td><td>m =</td><td>0.14</td><td>0.02</td><td></td><td></td><td></td><td>169</td><td></td></th<>	10-1-2				1.30	00	30	0.02		2.39	m =	0.14	0.02				169	
45 8*0 221 25 0.05<		77	7.8	247	25	ω ,	18	(0	131	~ ((1.0	0.5	90.0	19	145	96
45 8.0 221 25 6 15 0.05 0.05 0.05 0.05 0.05 0.05 0.06 19 135 0.5 0.06 19 135 0	10000				97	0.00	28	•		62 - 7 - 3	° ~	7	0.02				162	
41 7.6 212 24 4 13 11 0 117 11 4 0 0.5 0.06 20 155 155 27 1 1 85 10 5 10 5 10 5 10 5 10 5 10 5 10		45	8	221	25	9 (15	(0	127	•		1.5	0.5	90.0	19	135	87
41 7.6 212 24 4 13 1 0 117 11 4 0 0.5 0.06 20 155 26 15 27 0.03 0.57 0.03 1.92 0.23 0.11 85 10 5	701				1.25	20	0.65	0		06	•	•	0.02				139	
1.02 0.55 0.05 1.92 0.25 0.11	77	41	7.6		24	(13	(0	117	7 7	3 .	0	9.0	90.0	20	155	11
	101				1.50	0 ~	27	0		1.92	10	0.11					135	

TARIF D.2

		S	
		L ANALYSES	
		CHEMICAL	
	ATER	AL DETERMINATIONS, AND ADDITIONAL CHEMICAL	1 1
	ACE W	AND .	POINT
2 .0	F SURF	ATIONS	200
MOLE	MINERAL ANALYSES OF SURFACE WATER	DETERMIN	CAINIAC
	MINERAL	ACTERIOLOGICAL	VANIA AND ADAMACE DOOMING ATMAC
		FIELD OBSERVATIONS, BACTERIOLOGICAL	
		FIELD	

Analyzed	by b			DWR	DWR	DWR	DWR
	Percent			86	100	107	6
Dissolved oxygen	Parts per million			10.4	10.2	10.0	0.0
	Phenoi						
r million	Turbidity	518		A (a	Λ 2.4	1	52 V
in parts pe	NH4						
Constituents, in parts per million	Syndets	VEJK					
	POG	SANTA AIM RIVER					
Collform	MPN/ml	102 1		66.2	6.2	700+	57 77 77 77 70 77
	100	numbor		7.5	7.4	1 1	&
Gaga ht.(ft)	Flow (cfs)	Stream name and station number		None FO est.	None 20	None 20 bid	9-3-64 Rone 22 Clear; arsenic = 0.0 ppm
Dote	Time Remarks	Stream name	HEAR METITORE	6-6-64 0725 Clear	7-14-64 1110 Clear	8-6-64 Hone 1500 50 Slightly turbid	9-3-64 1130 Clear; arsen

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

	Total hordness caco ₃			න න		2	7	66	
tuents in	Sili- Evapi809c Evapi059c SiO ₂ Computed			147	153	157	166	161	\$ 4 T
consti	S:11			20		18	1.7	14	
Mineral constituents parts per million	Boron			0.05		0.07	90.0	0.08	
	Fluo- ride F			5.0		4.0	0 • 5	ý • O	
	Ni - trote NO3			1.1	-	0.0	0.02	0.02	
million	Chlo-	518		4 0 0 1 1 1	7	6 0 0 1 7	0.17	7 00.00	35
per	Sulfate 504			14	12	15 0 31 12	0.25	12	10
ports per equivalents percent re	Bicar - bonote HCO ₃			125	œ	128 2.10 81	125 2.07 82	129	02
ports equival percen	Carbon- ofe CO3	~		0		0	0	С	
n	Potos-	A RIVER		0.05	2	0.03	0.05	2 0.05	N
Mineral constituents	En pos	SANTA ANA RIVER		18	30	15 0.65 26	15	15	52
ineral co	Magne- srum Mg	ý		0.41	16	0.49	0.41	0.41	90
W	Colcoum			1.35	52	1.35	28	29	20
Specific conduct-	mhos at 25°C)			236		239	243	245	
	Hd	number		7 . 4		7 • 3	7 - 3	7.9	
Temp	when sampled in ^o F	stotion n		5.2		65	99	58	
	DATE SAMPLED	Pu	NEAR MENTONE	79-7 -9		7-14-64	8- 6-64	9- 3-64	

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES TABLE D-2

Analyzed	by b		DWIR	DWR	DWR	DWR	DWR	DWR	DWR	DWR
oxygen	Percent		104	52	48	65	476	113	35	.33
Dissolved oxygen	Ports per million		5.6	5.0	ς, α	6.9	c.	3.6	٠ <u>.</u>	0.7
	Phenoi	51.6								
er million	Turbidity		\$ 25	145	A 25	V € €	30	35	A 50	7. 7.
Constituents, in parts per million	NH4									
Constituent	Syndels	RIVER	1.2	8.0	8.0	1.48	00	1.40	1.60	0.0
	PO4	SANTA ANA RIVER	1.1	9.25	ς. Ω.	11	6.3	8.75	010	4.3
Coliforma	MPN/m1		620	620	620	7200 8470	130	230 1300	130 2300	089 080
1	H 0	ion number	8.0	7.7	7.4	7.6	7.4 Yoam	7.1 Foam	7.3	, Y. J.
Gage ht.(ft)	Flow (cfs)	ond station	None 20 est.	None 30 est. (urbid; storm	None 1005 ho est. Slightly turbid; some foam	None 35 est.	2-7-64 None 1350 22 est. Slightly turbid; some	3-5-64 None 1055 20 est. Slightly turbid; some from	Hone 50 est.	Hone 18 est.
Date	Remarks	Stream name and stat	10-3-63 1445 Clear	11-7-63 1100 Slightly	12-6-63 1005 Slightly to	1-14-64 1720 35 Clear; some foam	2-7-64 1350 Slightly th	3-5-64 1055 31.ightly ta	1335 110 100 100 100 100 100 100 100 100 10)-8-64 1120 Clear; foan
	œ	Stre	- G	11 13	12	-138-	2-1	F 4 8	1, 1-C	Cle

-138-

TABLE D-2 MINERAL ANALYSES OF SURFACE WATER

MINERAL ANALYSES OF SURFACE WATER
SANTA ANA DRAINAGE PROVINCE (Y)

w nen sampled in of 54 7°7 54 7°5 54 7°5 54 7°5 61 7°5 70 7°5 64 7°6		Тетр		Specific conduct-	Σ	Mineral co	constituents	ë	por	parts per equivalents percent re	millior per actance	million			Mineral	const per m	constituents in	
SANTA ANA RIVER 3 772 7-7 1187 4-89 2-39 4-87 0-20 52 131 130 377 1-0 0-443 28 724 3 6 7 0-60 322 131 130 377 0-60 32	DATE SAMPLED	sampled in ^o F	T a	(micro- mhos at 25°C)	Colcium	Mogne- sium Mg	Sodium	Potas -	Carbon- ate CO ₃	Bicar - bonote HCO ₃	Sulfate SO ₄	Chlo-	rote No.	Fluo-	Boron	Sili-	T D S Evap1809C Evap1059C Computed	Total hordness CaCO ₃
3	Stream name and	stotion	numbe															
72 7.7 1187 98 2.30 4.31 130 37 1.00 0.43 28 724 62 7.8 1100 4.87 0.20 5.28 2.73 3.67 0.60 9 724 726 62 7.8 1100 4.90 2.06 4.61 0.23 0.492 2.72 3.67 0.60 9	NEAR NORCO					7			¥			51E						
62 7.8 1100 4.89 2.30 4.487 0.20 5.28 2.73 3.67 0.60 5 732 54 7.6 1100 4.44 2.06 4.61 0.23 4.92 2.50 3.38 0.42 2.5 6.69 54 7.6 1125 100 3.2 1.23 0.20 2.50 3.38 0.42 2.5 6.69 6.72 <td< td=""><td></td><td>72</td><td>7 - 7</td><td>1187</td><td>86</td><td>28</td><td>112</td><td>80</td><td>0</td><td>322</td><td>131</td><td>130</td><td>37</td><td>0</td><td>0.43</td><td>28</td><td>726</td><td>240</td></td<>		72	7 - 7	1187	86	28	112	80	0	322	131	130	37	0	0.43	28	726	240
52 7.8 1100 4.0 19 40 2 43 22 30 5 30 5 73 73 73 73 73 73 73 73 73 73 73 73 73 73 74 73 74 73 74 74 73 74 74 74 75 74 75 74	10- 3-63				4.89	2.30	4.87	0.20		5.28	2.73	3.67	09.0			7	\$ 7 -	
54 7.8 1100 49 2.55 4.00 30 120 120 264 3.98 0.42 2.50 3.98 0.42 2.50 3.49 120 120 4.92 2.50 3.49 120 4.92 2.50 3.49 120 4.92 2.50 3.49 120 4.92 2.50 3.49 120 4.92 2.50 3.49 120 3.49 120 4.92 2.50 3.49 120 3.40 4.12 0.34 4.12 0.34 4.12 0.34 4.12 0.34 4.12 0.34 4.12 0.34 4.12 0.34 4.12 0.34 4.12 0.32 2.32 2.32 2.32 3.53 0.35 3.40 776 51 7.75 1101 1.09 2.22 4.44 2.71 3.50 0.35 2.32 2.32 3.53 3.55 3.53 3.55 3.53 3.55 3.53 3.55 3.53 3.55 3.					040	19	04	2		43	22	30	5				732	
54 7*6 1252 100 4*44 2*06 4*61 0*23 2*56 3*36 0*42 2*59 3*38 0*42 2*59 3*38 0*44 2*2 3*30 0*42 2*59 3*38 0*44 2*30 3*36 3*36 3*36 3*36 3*34 755 59 7*5 1122 4*9 2*63 5*70 0*20 5*72 2*91 4*12 0*34 775 61 7*5 1122 4*99 2*63 5*70 0*27 2*29 4*12 0*34 775 61 7*5 1122 4*0 0*20 0*27 2*27 3*53 0*55 2*6 770 61 7*5 1101 109 2*5 106 7 0*44 2*71 3*5 0*5 4 775 58 7*3 1106 7*3 0*5 12*3 12*3 0*5 0*4 775 58 7*4 <t< td=""><td></td><td>62</td><td>7.8</td><td>1100</td><td>89</td><td>25</td><td>106</td><td>6</td><td>0</td><td>300</td><td>120</td><td>120</td><td>26</td><td>6.0</td><td>0.42</td><td>25</td><td>099</td><td>325</td></t<>		62	7.8	1100	89	25	106	6	0	300	120	120	26	6.0	0.42	25	099	325
54 7.66 1252 100 32 122 69 349 146 21 1.1 0.46 34 176 21 1.1 0.46 34 755 59 7.6 1122 4.99 2.63 5.02 5.72 2.91 4.12 0.34 1.1 0.46 34 176 34 1.1 0.46 34 1.25 34 1.1 0.46 34 176 34 1.1 0.46 34 1.25 34 1.0 0.46 34 776 <td>11- 7-63</td> <td></td> <td></td> <td></td> <td>7707</td> <td>2.06</td> <td>4.61</td> <td>.2</td> <td></td> <td>4.92</td> <td>2.50</td> <td>3.38</td> <td>0.45</td> <td></td> <td></td> <td></td> <td></td> <td></td>	11- 7-63				7707	2.06	4.61	.2		4.92	2.50	3.38	0.45					
54 7.6 1252 100 32 122 6 349 140 146 21 1.1 0.46 21 4.12 0.34 1.10 0.46 3.40 1.22 2.91 4.12 0.34 1.11 0.46 3.75 3.52 2.91 4.12 0.34 1.22 3.53 0.45 3.50 0.45 3.53 0.46 3.75 3.50 0.45 3.75 3.50 0.45 3.75 3.50 0.45 3.75 3.50 0.45 3.75 3.50 0.45 3.75 3.50 0.45 3.75 3.75 3.50 0.45 3.75 3.75 3.50 0.44 3.75					33	18	7 7	2		777	22	30	4				699	
59 7.5 1122 4.84 2.14 4.87 0.20 5.72 2.91 4.12 0.34 776 61 7.5 1101 109 2.5 106 4.61 0.18 0.34 2.22 2.22 2.8 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5		54	7.6	1252	100	32	122	89	0	349	140	146	21	1.1	94.0	34	755	381
4-64	12- 6-63				66.4	9.	5.30	0.20		5.72	2.91	4.12	0.34					
4-64					38	20	40	2		77	22	31	3				776	
4-64 61 7.5 1101 109 25 106 6-64 64 7.6 1155 109 27 109 6-64 64 7.6 1155 109 27 109 6-64 64 7.6 1155 109 27 109 6-64 64 7.6 1155 109 27 109 6-64 64 7.6 1155 109 27 109 6-64 65 7.6 109 109 109 109 109 109 109 109 109 109		66	7.5	1122	16	26	112	8	0	317	132	125	34	1.0	0.52	26	720	349
7-64 61 7-5 1101 109 25 106 7 0 344 130 124 29 5 7 10 10 10 10 10 10 10 10 10 10 10 10 10	1-14-64				4.84	. 1	4.87	.2		5.20	2.75	3.53	0.55					
7-64 61 7-5 1101 109 225 106 4-61 0-18 0 344 130 124 29 1-0 0-44 26 710 5-64 5-64 5-71 3-50 0-47 5-64 5-64 5-71 3-50 0-47 5-64 5-64 5-71 3-50 0-47 5-64 5-64 5-71 3-50 0-47 5-64 5-64 5-71 3-50 0-47 5-64 5-64 5-71 3-50 0-47 5-64 5-64 5-71 3-50 0-47 5-64 5-64 5-71 3-50 0-47 5-64 5-64 5-71 3-50 0-47 5-64 5-64 5-71 3-50 0-47 5-64 5-64 5-71 3-50 0-47 5-64 5-64 5-71 3-50 0-47 5-64 5-64 5-71 3-50 0-47 5-64 5-64 5-71 3-50 0-47 5-64 5-64 5-71 3-50 0-47 5-64 5-64 5-71 3-50 0-47 5-64 5-64 5-71 3-50 0-47 5-64 5-64 5-71 3-50 0-47 5-64 5-64 5-71 3-71 3-71 3-71 3-71 3-71 3-71 3-71 3					40	18	04	2		43	23	29	5				717	
5-64 58 7.3 1106 63 4.61 0.18 5.64 2.71 3.50 0.47 7.75 1066 94 2.72 2.82 2.84 2.71 3.50 0.47 7.75 1066 94 2.22 4.48 0.18 5.18 2.84 2.81 3.73 12.0 0.9 0.43 30 762 8-64 8-64 8-64 8-64 8-64 8-64 8-64 8-64		61	7.5	1101	109	25	106	7	0	344	130	124	29	1.0	0.44	26	710	375
5-64 58 7.3 1106 63 44 17 38 1 46 22 28 4 4 7.6 1155 1106 69 27 2.2 2 4.48 0.18 0.18 0.18 0.18 0.18 0.18 0.18 0.1	2- 7-64				5.44	0.	4.61			5.64	2.71	3.50	14.0					1
5-64 58 7.3 1106 63 63 49 105 7 0.18 5.33 2.56 3.53 0.87 0.8 0.60 27 683 6-64 7.6 1155 109 2.7 109 27 100 0.15 0.18 0.18 0.18 0.18 0.18 0.18 0.18 0.18					7 7 7	17	38	-		94	22	28	4				727	
5-64 70 7.5 1066 94 27 103 7 6.18 5.35 2.56 3.53 0.37 6-64 64 7.6 1155 109 27 106 6.18 37 118 28 0.8 0.46 27 673 8-64 64 7.6 1155 109 27 106 6 0 332 135 13 12.0 0.9 0.43 30 762 8-64 7.6 1155 109 27 106 6 0 332 135 133 12.0 0.9 0.43 30 762 8-64 7.6 1155 109 27 106 6 0 332 135 133 12.0 0.9 0.43 30 762		58	7.3	1106	63	65	105	7	0	325	123	125	23	0.8	0.60	27	695	359
6-64 7.6 1155 109 27 108 0.18 2 45 22 30 3 3 68 0.46 27 675 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	3- 5-64				3.14	0	4.57	. 1		3	2.56	3.53	0.37					
6-64 7.6 1155 109 2.7 103 7 0 314 122 118 28 0.8 0.46 27 675 875 8-64 3.33 0.45 8-64 2.22 4.48 0.18 37 0.15 8-64 2.22 4.48 0.18 3.32 13.2 13.2 13.3 12.0 0.9 0.43 30 762 8-64 2.22 4.61 0.15 10 0.15 1					97	34	38	2		45	22	30	6				683	
6-64 64 7.6 1155 109 2.22 4.48 0.18 5.15 2.54 3.33 0.45 4 682 8-64 4.7 1155 109 27 106 6 0 332 135 135 0.19 0.9 0.43 30 762 8-64 4.4 18 37 1 1 45 2.3 31 2.2 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		70	7.5	1066	76	27	103	2	0	314	122	118	28	0 8	0.46	27	675	346
8-64 64 7.6 1155 109 27 106 6 0 332 135 133 12.0 0.9 0.43 30 762 72.0 0.9 0.43 30 762 109 10.0 10.0 10.0 10.0 10.0 10.0 10.0	79-9-7				69.4	.2	4.48	0		5.15	2.54	3.33	0.45					2
8-64					41	19	39	2		45	22	29	4				682	
8-64 5.44 2.22 4.61 0.15 5.44 2.81 3.75 0.19 723 44 18 37 1 45 23 31 2	,	99	7.6	1155	109	27	106	9	0	332	135	133	12.0	6.0	0.43	30	762	383
18 37 1 45 23 31 2	79-8-9				2.44	2.22	4.61	0.15		5.44	2.81	3.75	0.19					
					77	18	37	7		45	23	31	2				723	

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER FIELD OBSERVATIONS, BACTERICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES

SANTA ANA DRAINAGE PROVINCE (Y)

Analyzed	by b			DWR	DWI	DWR	DMR
oxygen	Percent			1,8	109	1.9	E
Dissolved oxygen	Parts per million			o. a	o,	5.6	0.00
	Phenol						
million	Turbidity	51E		v S	35	1	A 57
Constituents, in parts per million	NH4						
Constituent	Syndets	ER		٥.5	_	0.57	0.62
	PO4	SANTA ANA RIVER		2.4		rJ.	હ જ
Coliforma	MPN/ml	20.		2400	620 62	2400 2400	\$10 \$10
	Field pH	nember		7.3	74	7.5 re in river	4.7
Gage ht.(ft)	Flow (cfs)	Stream name and station number		Kone 40 est.	Hone 18 est. mers upstream	8-6-64, 20 est. 7.5 1135 Clear; some foam; swimmers in river	Norme 1, est.
Date	Time	Stream name	NEAR NORCO	0-5-63 1215 Clear	7-14-64 Hone 1410 18 est. Clear; swimmers upstream	8-6-64, 1135 Clear; some	9-4-64 1115 Clear; arschic = 0.0 g

MINITAL ANALYSES OF SUREACE WATER SANTA ANA DRAINAGE PROVINCE (Y)

TABLE D-2 MINERAL ANALYSES OF SURFACE WATER

MINERAL ANALYSES OF SURFACE WATER
SANTA ANA DRAINAGE PROVINCE (Y)

	Total hordnes os CaCO3		384	363	368	25.3
lion	Evapl80% hordness Evapl05% 03		754	758	780	720
er mi	S.11		2.7	54	26	27
Mineral constituents parts per million	Boron		0.42	64.0	0.53	0 9 0
	Fluo- ride		8 0	6.0	1 . 4	• • • • • • • • • • • • • • • • • • • •
	Ni - trote NO3		20 0 32	20 0 • 32	35 0 . 56	2.6 4.9 3.2
million	Chlo-	51E	131	3.64	135 3 • 81 30	3 9 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9
million per sactance	Sulfate SO ₄		132 2 . 75	138 2.87	128 2.66	2 0 0 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
parts per equivalents percent re	Bicar bonote HCO ₃		336	334	347	6 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8
par ts equiva percen	Carbon- afe CO ₃	œ	0	0	0	0
i	Potos- Sium X	A RIVE	0.18	0.18	7 0.18	8 0 7
nstifuents	En-pos	SANTA ANA RIVER	107	108	114	4.83 4.03
Mineral constituents	Mogne- stum Mg	S	2.14	2.22	1.97	2,06
W	Colcium		111 5.54	101	108	100
Specific conduct-	micro- mhos at 25°C)		1144	1139	1169	1145
	H	number	7.5	7.4	7.2	9.
Temp	when sampled in ^o F	1	8 9	79	7.7	8 9
	DATE SAMPLED	Stream name and station NEAR NORCO	9-5-64	7-14-64	8 - 6-64	79-7-6

MINERAL ANALYSES OF SURFACE WATER FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES SANTA ANA DRAINAGE PROVINCE (Y) TABLE D-2

Analyzed	by b			DWR	DWR	DWIs	DWR	DWR	DWR	DWR
oxygen	Percent			2	2.5	8	16	105	107	106
Dissolved oxygen	Parts per million			7.5	10.2	8.6	C. €.	17.8	0.3	9;
	Phenoi	SIF								
r million	Turbidity	2		004	∆	750	70	Ĉ,	1	S
Constituents, in parts per million	NH4			13	1.24	3.5		9	٥, ١	ਰ
Constituent	Syndets	RIVER		0.3	6.3	5.20	4.20	ر. د.	**	17.8
	PO4	SAUTA ANA RIVER		34	38	દૂપ	11.5	©. O	52	01
Coliforma	MPN/ml			7.2 240 34 YOUNT PARTICLES FLOWING THROUGHOUT STREEM	333	700	620 2400	620	230	7000+ 620 c = 0.0 ppm
	HQ PI	n number		7.2 urticles flo	7.3	7.14	7.4	7.4	7.5	7.3 foam; arseni
Gage ht.(ft)	Flow (cfs)	and station		3-6-64 5.44 0930 19 Turbid; foam; solid p	5.66 16 # Illow	6.01 18	5.22 6.0 ne foam	5.16 16.0	8-6-64 4.99 1250 16.2 3lightly (urbid; foam	9-3-64 h.84 1019 9.8 Slightly turbid; some
Date	Time Remarks	Stream name and statio	AT COLTON	3-6-64 0930 Turbid; 1	14-14-614 5 0520 16 Clear; low Ilow	5-7-64 1045 Turbid, fpmm	6-4-64 5. 0615 6. Clear; some foam	7-14-64 5. 1240 16. Clear; some foam	8-6-64 1250 3lightly	9-3-64 1019 Slightly t

MINERAL ANALYSIS OF SURFACE WATCH

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

	Temp		Specific conduct-	2	Mineral co	constituents	Ë	parts equiva percen	parts per equivalents percent re	million per actance	Fillion			Mineral parts p	constituen	constituents in per million	
DATE SAMPLED	when sampled in oF	T.	mhos of 25°C)	Calcium	Mogne- such Mg	Sodium	Potas -	Carbon- ote CO ₃	Bicar - bonate HCO ₃	Sulfate SO4	Chlo-	rote NO3	Fluo- ride	Boron	Sili- co SiO ₂	Evaple90 Chardness Evaplo50 CaCo3	Total hardness CaCO ₃
Stream name and station	1	number															
AT COLTON					"	SANTA ANA RIVER	A RIVE	~			51F						
	68	7.4	1028	52	20	123	16	0	290	76	128	20	0.	0.62	-	615	213
3- 6-64				2.59	1.64	5.35	0.41		4.75	1.58	3.61	0.32			1		717
				26	16	54	7		949	15	35	6				610	
	96	7.5	921	33	22	117	15	0	279	79	96	30	1.2	0.76	35	570	173
79-7 -7				1.65	1.81	5.09	0.38		4.57	1.64	2.71	0.48			1		-
				0 7	20	10	5		64	17	59	2				995	
	99	7.2	801	29	21	88	14	0	549	7.1	63	36	1.5	0.52	32	2	0.0
5- 7-64				1.45	1.73	3.83	0.36	_	4.08	1.48	1.78	0.58		1	76	010	103
				20	23	25	5		52	19	22	7				478	
	70	7.3	1093	42	28	134	16	0	291	73	139	12	1.7	02.00	72	645	000
79-7 -9				2.10	2.30	5.83	0.41		4.77	1.52	3.92	0.19			1	2	027
				20	22	55	4		949	15	38	2				623	
	81	7.3	865	36	21	92	13	0	292	7.3	72	ď	0.0	7.0		505	1 1
7-14-64				1.80	1.73	4.00	0.33		4.79	1.48	2.03	0.05			10	240	, , ,
				23	22	51	4		57	18	54	1				485	
	88	7.3	851	39	20	16	10	0	240	72	79	42	1 • 8	0.56	33	543	180
\$010 ID				1.95	1.64	3.96	0.26		3.93	1.50	2.23	0.68)
				67	77	21	m		24	18	27	89				504	
	80	7.5	606	36	23	92	14	0	322	73	77	14	1.6	0.64	3.0	544	185
7- 3-04				1.80	1.89	00.4	0.36		5.28	1.52	2.17	0.23					,
				77	5.3	20	4		2.5	17	24	3				520	

ONAL CHEMICAL ANALYSES TABLE D-2
MINERAL ANALYSES OF SURFACE WATER FIELD OBSERVATIONS, BACTERIO

ADDITI	2
S. AND	PROVINCE (Y)
NATION	
RIOLOGICAL DETERMINATIONS, AND ADDITION	DRAINAGE
GICAL	ANA
TERIOLOGICAL	SANTA

Analyzed	by b			DWR	DWIK	DWR	DWR	DWR	DWR	DWR
oxygen	Percent			ડ ડ	୯	100	4 8	102	911	101
Dissolved oxygen	Parts per million			%. %.	a	†*************************************	8.0	9.5	8.8	0.
	Phenol									
r million	Turbidity	513		₹ <u>`</u>	\$€	100	425	35	1	132
Constituents, in parts per million	NH4			1.5	17.2	5.8		т	9	4.0
Constituent	Syndets	CREEK		5.144	1.4	1.40	9:	1.8	1.8	ď
	PO4	SAN TIMOTEO CREEK		33	38	54	28.5	1.7	1,7	Ţ
Coliform	MPH/mi			62 500	700+	7000	620	620 130 streambed	1300	130 620 = 0.0 ppm
	Hd Die	number		7.4	7.7 or; insects	9.7	9.7	7.8	∞	7.3
Gage ht.(ft)	Flow (cfs)	Stream name and station number	INDA	2.27 1.8 1c foam	1-4-64 2.20 7.7 1205 0.6 Clear; foun; sewage odor; insects	1.3	2.15	2.34 1.2 1; green alga	2.34 1.6 : form	
Date	Time	Stream name	NEAR LOMA LINDA	3-6-64 2.27 1035 1.8 Clear; little foam	14-4-64 1205 Clear; form	5-7-64 1150 1.3 Turbid; mach foam	6-4-64 0655 Clear; foam	7-14-64 2.34 1150 1.2 Clear; foun; green al	8-6-64 1350 Clear; som	9-3-64 2.2 1050 2.2 31ightly turbid; some

SANTA ANA DRAINAGE BEAUTINGS

MINIMAL ANALYSES OF SUBBACE WATER

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

Stream name and station number NEAR LOMA LINDA 4- 4-64 5- 7-64 5- 7-64 6- 4-64 70 7.4 1004 6- 4-64 89 7.4 70 7.6	Specific conduct-	×	Mineral co	constituents	.c	pod	ports per equivalents percent re	millior per eactance	million			Mineral parts p	constituents per million	tuents in	
56 7.8 10 70 7.6 1 58 7.2 65 7.4 1 79 7.4 1		Calcium	Magne- sium Mg	Sodium	Potes- sium X	Corbon- ote CO3	Bicar - bonate HCO3	Sulfate SO ₄	Chlo-	rote No3	Fluo-	Boron	S.11 co S.02	Evaple99 Caco3	Total hardness as CaCO ₃
66 7.8 1 70 7.6 1 58 7.2 1 65 7.4 1 79 7.4 1			15	SAN TIMOTEO CREEK	TEO CRE	FEK			516						
66 7.8 10 10 10 10 10 10 10 10 10 10 10 10 10															
70 706 1 58 702 65 704 1 79 704 1	1024	57	23	120	13	0	393	82	96	3.1	1.2	0.46	26	009	237
70 7.66 1 58 7.2 65 7.44 1 79 7.44 1		2.84	1.89	5.22	0.33		6.44	1.71	2.71	0.05				615	
58 7°2 65 7°4 1 79 7°4 1	1104	52	32	124	12	0	437	101	86	5.0	1.0	7700	25	940	261
58 7°2 65 7°4 1 79 7°4 1 74 7°4 1		2.59	2.63	5.39	0.31		7.16	2.23	2.76	0.08				671	
65 7.44 1 79 7.44 1 74 7.44	703	77	18	70	6	0	224	53	69	23	1.0	0.20	22	077	184
65 7°4 1 79 7°4 1 74 7°4 7	-	2.20	1.48	3.04	0.23		3.67	1.10	1.83	0.37				415	
79 7°4 1 89 7°4 7	1004	53	31	124	14	0	369	123	77	10	1.4	0 * 0	28	634	260
79 7°4 1		2.64	2.55	5.39	0.36		6.05	2.56	2.17	0.16				643	
89 7 4. T 4.	1028	5.0	1 6	122	12	C	408	96	84	0.6	1.4	7700	24	650	257
40.7 94.7 7.47		2.50	2.63	5.30	0.31		6.69	1.98	2.37	0.01				622	
407 77	845	64	19	98	10	0	288	80	63	38	2 • 1	0.28	25	552	201
7 - 4		2.45	1.56	4.26	0.26		4.72	1.67	1.78	0.61				526	
	707	64	18	75	80	0	250	62	52	35	1.6	0.22	24	468	197
9- 3-64		2.45	1.48	3.26	0.20		4.10	1.29	1.47	0.56				448	

MINERAL ANALYSES OF SURFACE WATER FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES TABLE D-2

Analyzed	by b			DWR	DWR	DWR	DWR	DWR	DWR	DWR	DWR
oxygen	Percent			79	91	50	58	99	09	73	133
Dissolved oxygen	Parts per million			œ. و	5.6	6.2	8.9	7.2	9.9	7.4	13.2
	Phenol										
r million	Turbidity	98		25	100	100	∆ 22	150	50	04	30
Constituents, in parts per million	4HN										
Constituent	Syndets				0.52	1.72	1	0.72	1.40	0.78	
	P04	CHINO CREEK		7. 8.	3.4	15	1	۳ ق	230 1.3 2400 igation water into stream	lo e life	
Coliforma	MPN/ml			6200	3,000	60	62	230	230 2400 igation wate	23 62 small marine	240
	Ha Diei	n number		8.2 and insect.	8.0	8.0 am	0.0	7.9 ittle foam	8.0 cfs. of irm	8.0 sewage odor	7.8
Gage ht.(ft)	Flow (cfs)	and station		10-3-63 None 1300 2 Est. Turbid; mosquito larvae	12-7-63 None 1215 4 Est. Very turbid; sewage oddr	12-6-63 None 0845 1.5 Est. Turbid; sevage odor; foam	Lone Ponded wage odor	2-7-64 Rone 1400 0.5 Est. Turbid; sewage odor; 11	None 4 Est. m; approx. 2	4-6-64 Hone 1050 0.5 Est. Ulightly tyrbid; foam;	None 2 Est. age odor; sq
Dote	Remarks	Stream name and statio	NEAR CHINO	10-3-63 1300 Turbid; mo:	11-7-63 1215 Very turbio	12-6-63 0845 Turbid; sev	1-14-64 icone 1850 Ponded No flow; sqwage odor	2-7-64 1400 Turbid; sev	3-5-64 None 1200 4 Est. Turbid; foam; approx.	4-6-64 1050 31ightly tu	5-8-64 Hone 1220 2 Est. Turbid; sewage odor;

SANTA ANA DRAINAGE PROVINCE (Y)

MINERAL ANALYSES OF SURFACE WATER

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

MINERAL ANALYSES OF SURFACE WATER
SANTA ANA DRAINAGE PROVINCE (Y)

	Temp		Specific conduct-	2	Mineral co	constituents	.5	pod	parts per aquivalents percent re	million per sactance	million			Mineral constituents parts per million	const	fuents in	
DATE SAMPLED	sompled in o F	H	(micro- mhos at 25°C)	Calcium	Mogne-	Sodium	Potas- sium K	Carbon- ate CO ₃	Bicar - bonate HCO ₃	Sulfate SO ₄	Chio- ride Ci	Ni - trate NO ₃	Fluo-	Boron	Sili- ca SiO ₂	TDS Evap1809C Evap1059C Computed	Total hardness caco ₃
Stream name and station		number	1			CHINO CREEK	FEK				86						
NEAR CHINO																	
	74	7 • 7	548	77 77	13	45	16	0	229	31	3	12	6.0	0.32	25	338	164
10- 3-63				2.20	1.07	1.96	0.41		3.75	0.65	0.99	0.19				335	
	57	7.2	357	37	0	17	13	0	134	28	17	17	0.8	0.12	12	230	130
11- 7-63				1.85	0.74	0.74	0.33		2.20	0.58	0.48	0.27				217	
	77	7.6	606	53	22	96	29	0	386	52	74	7.5	1.1	0.28	34	560	223
12- 6-63				2.64	1.81	4.17	0.74		6.33	1.08	2.09	0.12				559	
	48	7.7	776	77	22	102	33	0	483	77	70	17	1.5	0.48	26	629	283
1-14-64				3.84	1.81	4.43	0.84		7.92	0.92	1.97	0.27				630	
	53	7.3	632	59	1		16	0	273	56	36	30	9•0	0.16	58	410	217
2- 7-64				2.94	1.40	2.39	0.41		4.47	1.17	1.02	0.48				433	
	52	7.7	800	57	19	77	24	0	346	5	56	15	1 • 1	0.34	27	505	220
3- 5-64				7°8 + 7	1.56	40	19.0		999	1.13	1.00	6.29				200	
	09	8 • 0	798	61	-	87	18	0	352	51	62	15	1.4	0.48	23	515	218
79-9 -7				3.04	1,32	3.78	0.46		5.77	1.06	1.75	0.24				508	
	61	7.1	869	65	7	85	13	0	228	3	132	15	1 0 1	0.27	25	563	236
5- 8-64				3.24	1.48	3.70	0.33		3.74	0.69	3.72	0.24				664	

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES

SANTA ANA DRAINAGE PROVINCE (Y)

Analyzed	by b			DWR	DWR	DWR	DVIR
oxygen	Percent			78	191	162	15:
Dissolved oxygen	Parts per million				114.2	16.8	12.5
	Phenol						
r million	Turbidity	98		230	110	1	1,5
Constituents, in parts per million	NH4						
Constituents	Syndets			9.0	2.0		
	PO4	CHINO CREEK		2.0	0.0		
Coliforma	MPN/ml	D		5400	230	620	000000000000000000000000000000000000000
	Field pH	number		7.7	8.0 much foam	8.0	7.th
Gage ht.(ft)	Flow (cfs)	Stream name and station number	0	Hone 0.5 Est.	None Ponded insects;	None Ponded	None Ponded
Dote	Time Remarks	Stream name	NEAR CHINO	6-5-64 ifone 1100 0.5 I Turbid; some foam	7-14-64 1525 Turbid; many	8-5-64 None 1155 Ponder Turbid; sawage odor	9-4-64 1255 Very turbid,

MINEHAL ANALYSES OF SUNPACE WATER

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

	Temp		Specific conduct-	2	lineral co	Mineral constituents	Ë	por	ports per equivalents percent re	million per sactance	million		~	Mineral constituent parts per million	consti	constituents in per million	
DATE SAMPLED	sampled In o F	T a	(micro- mhos at 25°C)	Calcium	Magne- s-um Magne-	En Pos	Potos sium X	Carbon- ate CO3	Bicar - bonate HCO ₃	Sulfate SO ₄	Chlo- ride	rote No3	Fluor	Boron	Stli- co St02	Evop1809c hordness Evop1059c caCO ₃	Total hardness CaCO ₃
Stream name and station	station	number				AGGO ONING	n N				78						
NEAR CHINO						DN THE	4				0						
6-5-64	67	7.2	824	3.19	23 1.89 21	3.26	27 0.69	0	330	1.33	1.92	9.6	1.0	0.29	30	552	254
7-14-64	84	7.9	768	3.14	1.73	104	16 0.41	0	355	1.42	2.45	0.02	2.0	0.61	33	601	244
8 - 5-64	83	7.2	1119	5.04	2.80	3.96	19	0	354	246	1.89	9 0 15	0 8	0.38	30	788	392
79-7 -6	80	7 • 4	1311	133	52 4.28 28	93 4.04 26	18	0	421 6.90 45	316 6.58 43	1.89	90 • 0	9 • 0	0.16	8	940	546

FIONAL CHEMICAL ANALYSES MINERAL ANALYSES OF SURFACE WATER TABLE D-2 FIELD OBSERVATIONS, BACTERIO

100000

Analyzed	by b			DWR	DWR	DWR	DWR	DWR	DWR	DWR
Dissolved oxygen	Percent					!	711	120	146	711
Dissolved	Parts per million					1 1	9.5	10.4	10.8	10.2
	Phenul	0								
er million	Turbidity	89				A 25	100	₹ 25	\$ 25	A 22
Constituents, in parts per million	NH4									
Constituent	Syndets	RE						rved		
	PO4	LAKE ELSINORE				ring lake.	Park	dpoles obse	it water	
Coliforma	MPN/ml					8.6 Colorado River water entering lake.	6.2 23 gage at State	6 <0.45 larvae and tadpoles observed	8.2 < 0.45 0.6 of vegetation throughout water	9.9.
:	Field pH	number				8.6 Slorado Rive		8.0		С. w
Gage ht.(ft)	Flow (cfs)	Stream name and station number	ARK	Dry Lake	Dry Lake		3-9-64 1228.46 8.0 1015 Graylsh-white cast to water; USGS	5-15-64 1232.40 8.0 1305 Clear; swimmers in lake; mosquito	7-10-64 None 1330 Lake Slightly turbid; pieces	None Lake
Date	Remarks	Stream name	AT STATE PARK	11-12-63	1-6-64	2-19-64 1645 Lake 2-1/8 ft. deep;	3-9-64 1015 Grayish-wh	5-15-64 1305 Clear; swi	7-10-64 1330 Slightly t	9-18-64 1135 Clear

100 mg 21 c 00 c 21 c 00

MINERAL ANALYSES OF SURFACE WATER

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TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

MINERAL ANALYSES OF SURFACE WATER SANTA ANA DRAINAGE PROVINCE (Y)

Number Calcium Magne Sedium Potes Carton Bicor Suffere Chio		Temp		Specific conduct-	×	Mineral co	constituents	c	ports equiva percen	ivalents cent	500	million per million tance volue		2	Mineral constituents parts per million	er mi	fuents in	
See 8.6 2915 4,14 1.69 23.39 0.41 0.63 3.33 11.14 5.37 0.12 0.00 0.78 89 7.6 22915 4,14 1.69 23.39 0.41 0.63 3.33 11.14 5.37 0.12 0.00 0.46 77 8.2 1.76 8.2	DATE SAMPLED	when sampled		once (micro- mhos at 25°C)		Magne- s:um Mg	Sodius	Potas-		Bicar - bonote HCO ₃	Sulfate SO ₄	Chlo- ride Cl	rate NO3	Fluo- ride	Boron	Sili- ca SiO ₂	T D S Evap1809C Evap1059C Computed	Total hardness CaCO ₃
59 8.6 2915 4.83 1.23 5.38 0.41 0.63 3.33 11.14 15.37 0.12 0.78 8 54 8.0 1802 4.34 1.20 25.39 0.41 0.63 3.33 11.14 15.37 0.12 0.90 0.78 8 74 8.2 1760 4.24 12.20 0.25 0.23 0.41 0.63 3.33 11.14 15.37 0.12 0.90 0.78 8 75 8.3 3040 4.84 3.45 2.55 0.18 0.46 0.46 3.47 12.49 14.83 0.11 1.0 0.84 8 77 8.3 3040 4.84 3.45 2.59 0.46 0.63 4.57 12.49 14.83 0.11 1.0 0.84 8			numbe					SINORE				88						
9-64 59 8.6 2915 4.14 1.89 23.39 0.41 0.62 3.33 11.35 545 7.5 0.9 0.78 8 9-64 54 8.0 1802 4.34 2.14 12.09 0.41 0.62 3.33 11.35 545 7.5 0.9 0.78 8 9-64 74 8.2 1760 4.34 2.14 12.09 0.26 181 397 270 3.1 0.5 0.40 6 9-64 74 8.2 1760 4.39 2.38 11.26 0.23 0.39 7 8.27 7.61 0.05 7.6 0.46 7 9-64 73 8.3 3040 4.39 2.63 16.87 0.36 0.63 4.55 12.49 14.83 0.11 1.0 0.94 8 9-64 73 8.3 3040 4.34 2.37 2.39 1 0.46 0.63 4.57 12.49 14.83 0.11 1.0 0.94 8	11-12-63	-			1		1	1	1	1	1	-	1	1	1	1		
9-64 59 8.6 2915 481 123 538 116 10.63 3.33 11.14 15.37 0.12 0.78 8 9-64 54 8.0 1802 4.34 12.09 23.39 0.41 0.63 3.33 11.14 15.37 0.12 11.14 15.37 0.12 11.14 15.37 0.12 11.14 15.37 0.12 11.14 15.97 0.12 11.14 15.37 0.12 11.14 15.37 0.12 11.14 15.37 0.12 11.14 15.37 0.12 11.14 15.37 0.12 11.14 15.37 0.12 11.14 15.37 0.12 11.14 15.37 0.12 11.14 15.37 0.12 11.14 15.37 0.12 11.14 15.37 0.12 11.14 15.37 0.12 11.14 15.37 0.12 11.14 15.37 0.12 11.14 15.37 0.12 11.14 0.15 0.14 0.14 0.14 0.14 0.14 0.14 0.14 0.14	1- 6-64		1			l t	1	1	i t		1	1	1	-	-	1		
9-64 54 8.0 1802 4.34 2.14 12.09 0.26	2~19-64	29				7		0	19 0.63	203	535 11.14 36	545	7.5	6 • 0	0.78	80	1910	302
74 8.2 1760 86 29 259 0 198 376 250 1.00 0.66 0.46 7 89 7.6 2299 4.39 2.63 11.26 0.23 0.259 465 363 1.00 0.046 7 73 8.3 3040 4.39 2.63 16.87 0.36 4.25 9.68 10.24 0.02 1.0 0.84 8 73 8.3 3040 4.39 2.63 10.87 0.46 0.63 4.57 12.49 14.83 0.11 1.0 0.94 8 73 8.3 3040 4.14 3.70 23.91 0.46 0.63 4.57 12.49 14.83 0.11 1.0 0.94 8	3- 9-64	54			4	2.14	12	0.26	0	181 2.97	397	270	3.1	0 • 5	07.0	9	1175	324
89 7.6 2299 88 32 388 14 0 259 465 363 1:0 1:0 0.84 8 73 8.3 3040 4.39 2.63 16.87 0.36 1 18 40 4.25 9.68 10.24 0.02 1 0.84 8 73 8.3 3040 4.3 550 18 19 279 600 526 7 1:0 0.94 8 13 11 74 1 2 14 38 4.55 0.11 1:0 0.94 8	5-15-64	74						0.5	0	3.25	376	250	1.0	9 • 0	94.0	7	1170	334
73 8.3 3040 63 45 550 18 19 279 600 526 7 1.0 0.94 8 13 13 11 274 1 2 14 38 45 45 14.83 0.11 1.0 0.94 8 14.83 0.10 1.0 0.94 8 14.83 0.10 1.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	7-10-64	88			4	2.63	16	14 0.36	0	259	465	363	1.0	1 • 0	0.84	00	1520	351
	9-18-64	73					23	18	19 0 • 63	279	200	526 14.83 45	7 0 • 11	1.0	76.0	Φ	2020	392

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES TABLE D-2

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4	9	į
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Analyzed	by b			DWR	DWR	DWR	DWR	DWR	DWR
Dissolved oxygen	Percent			79	93	92	96	135	8
Dissolved	Ports per million			8.0	11.0	10.4	8 8	9.11	9. 6
	Phenol	51c							
er million	Turbidity			425	425	< 25	4 25	< 25	A 25
Constituents, in parts per million	NH4							₦*0	
Constituent	Syndels	SANTA MARGARITA RIVER							
	PO4	SANTA MARC							
Coliforma	MPN/m1			86.2	40.45	. v v	23	6.2	9 %
	Hd DID	number		7.4	7.8	7.6	7.6	7.5	7.3
Gage ht.(ft)	Flow (cfs)	Streem name and station number	ROOK	2.19 5 est.	2.40 8 est.	2.28 4.4	2.27	2.17	0-18-64 1.15 1005 Clear; argenic = 0.0 g
Dote	Remorks	Streem name	NEAR FALLBROOK	11-12-63 1500 Clear	1-6-64 1300 Very clear	3-9-64 1145 Clear	5-15-64 1100 Clear	7-10-64 1200 Clear	9-18-64 1005 Clear; and

TABLE D-2
MINERAL ANALYSES OF SURFACE WATCH

	WATER	(Z)
7-0	SURFACE	PROVINCE
L	MINERAL ANALYSES OF	SAN DIFGO DRAINAGE
		0,

	Temp		Specific conduct-	2	Mineral co	constituents	ē	por ts equiva percen	ts per ivalents cent re	millior per eactance	million			Mineral parts p	constituent per million	constituents in	
DATE SAMPLED	when sampled in ^o F	H	(micro- mhos at 25°C)	Colcium	Mogne- sium Mg	E 7 0 %	Potas -	Carbon- ote CO ₃	Bicar - bonate HCO ₃	Sulfate SO4	Chlo- ride	rote No.	Fluor	Boron	S:11-	TDS Total Evapl809c hardness Evapl059c CaCO ₃	Total hardness CaCO ₃
Stream name and station	1	number	_														
NEAR FALLBROOK					S	SANTA MARGARITA	RGARIT	A RIVER	~		51C						
	59	8 • 0	1242	63		135	4	c	00.7	C	3 5 6	(
11-12-63				49.4	2.63	5.87	0.10	_	6.88	2.06	4.37	0.01	0	0 > 0	33	140	364
				35	20	77	~		52	15	33					759	
	47	8 • 0	1139	92	29	127	4	0	356	125	142	0	9.0	0.18	38	725	340
1- 6-64				4.59	2.38	5.52	0.10		5.83	2.60	4.00					- 1	
					4		4		Ť	17	25					733	
3- 9-64	20	8.1	1134	91	32	122	6	0	342	137	146	0.5	0.5	0.16	22	715	359
				36	21	42			7.01	23	4.14	0.01				722	
	62	7.5	1179	95	31	121	6	С	678	128	147	0			ć	1	
5-15-64				40.74	2.55	5.26	0.08		5.72	2.66	4.15	0.01		77.0	76	00/	565
				38	20	45			94	21	33					729	
	74	4.6	1220	16	32	130	3	0	604	110	155	1.0	9.0	0.24	32	772	374
\$010TL				4.84	2•63	5.65	0.08		6.70	2.29	4.37	0.02					
					0.7	1	4		20	1 /	 					762	
0 - 10 - 67	67	7.6	1367	109	34	151	4	0	443	125	176	2	9.0	0.27	32	857	412
40-01-2				264	2.80	6.57	0.10		7.26	2.60	96 0 4	0.03					
				2	1	†	→		7 4	18	E E					852	

MINERAL ANALYSES OF SURFACE WATER FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES TABLE D-2

SAN DIEGO DRAINAGE PROVINCE (Z)

	MPN/m	Coliform ^a MPN/mi
	IIII / NILIW	THE CALL
	ESCONDIDO CREEK	DSG
	7,000 38	7,000 38
28	130 28	
31		3-9-64 2.19 7.2 62 31 13.5 est. 13 Turbid; some foam; mosquito larva in water
28.5	130 28.5	
m	2,400	7.2 2,400 3 fish observed
3.7		2,400

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TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
SAN DIEGO DRAINAGE PROVINCE (Z)

Chief SAMPLED Approximate and state Colorest No. Colorest State Colorest Color	Total Logs 44 Seedium Rogine Sium No transfer Sium Rogine Rogine Rogine Sium Rogine Rogine Rogine Rogine Sium Rogine Rog	percent reactance	million		M	Mineral constituent parts per million	w	in
1964 3-89 3-54 11-09 0-43 0-198 276 34-3 37 1-8 0-84 22 1195 1171 1964 3-89 3-54 11-09 0-43 0-25 3-25 5-75 0-60 3-79 3-74 3-7	7.1 1984 3.89 3.54 11.09 0.43 0.49 17.5 1773 3.74 3.29 10.17 0.46 4.74 2.55 17.0 1988 7.6 4.29 10.17 0.46 4.74 2.5 7.0 2184 4.59 3.70 11.87 0.43 6.22 7.0 2184 4.54 3.45 12.13 0.43 0.43 3.56 7.1 2053 84 45 254 0.51 0.41 0.51 0.41 0.205 7.1 2053 84 45 12.13 0.43 0.43 0.43 0.27 7.1 2053 84 45 12.13 0.43 0.43 0.43 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27	S					EvaplOS EvaplOS Computed	Total hordness CaCO ₃
56 7.1 1984 3.89 3.54 11.09 0.43 0 3.25 5.75 9.67 0.60 1719 53 7.5 1773 75 40 234 18 0 289 2.68 2.60 37 1.4 0.84 25 1171 56 7.4 1698 3.79 3.37 8.91 0.41 2.05 1.0 2.89 2.88 2.89 2.89 2.80 1.89 0.89 2.0 1.89 0.89	7.1 1984 3.89 3.54 11.09 0.43 3.25 7.5 1773 75 40 234 18 0 289 7.4 1698 76 41 205 10.17 0.46 4.74 7.1 2083 4.65 3.70 11.87 0.43 5.08 7.0 2184 91 42 279 1.70 287 7.1 2053 445 3.45 12.13 0.43 3.56 7.1 2053 4.45 12.13 0.43 3.56 7.1 2053 4.45 12.13 0.43 3.56 7.1 2053 4.45 12.13 0.43 3.56 7.1 2053 84 45 254 0.51 0.45 4.52		63					
7-1 1984 3.69 3.54 11.09 0.43 17 0 198 276 343 37 1.68 0.84 22 1195 7-5 1773 75 40 234 11.09 0.43 17 0 289 2.86 2.60 37 1.4 0.84 25 11071 7-4 1698 376 3.41 205 10.17 0.46 0.289 2.86 2.33 0.60 1.4 0.84 25 1075 7-1 2083 86 45 12.09 10.17 0.41 0.51 2.87 11.22 0.03 1.0 0.76 22 11370 7-1 2083 4.99 3.70 11.87 0.43 0.43 0.55 0.37 11.22 0.03 1.0 0.76 22 11370 7-1 2053 84 45 25 254 0.51 0.41 0.51 2.55 0.35 0.00 1.0 0.76 22 11285 7-1 1 2053 84 45 11.87 0.43 0.43 0.55 0.37 11.22 0.03 1.0 0.76 22 11285 7-1 1 2053 84 45 11.87 0.43 0.43 0.55 0.37 11.22 0.03 1.0 0.76 22 11285 7-1 1 2053 84 45 11.09 0.51 1.00 0.76 2.2 11285	7.1 1984 78 3.54 11.09 0.43 3.255 7.5 1773 75 40 234 18 0 289 7.4 1698 76 3.29 10.17 0.46 4.25 7.1 2083 486 4.5 91 0.41 0.41 5.08 7.0 2184 91 4.2 92 12.13 0.43 4.70 7.1 2053 484 45 12.13 0.43 3.56 7.1 2053 484 45 12.13 0.43 0.43 3.56 7.1 2053 484 45 254 0.51 0.45 3.56 7.1 2053 5.4 11.04 0.51 4.52							
7.5 1773 3.89 3.54 11.09 0.43 3.25 5.75 9.67 0.60 3 1171 7.6 1698 3.79 3.40 2.34 0.45 0.45 0.25 0.25 0.40 0.60 3	7.5 1773 3.54 11.09 0.43 3.25 7.5 1773 75 40 234 18 0 289 7.4 1698 76 41 205 316 0.41 7.0 2184 91 4.29 3.70 11.87 0.43 7.0 2184 91 4.5 12.13 0.43 7.1 2053 84 45 254 2.79 7.1 2053 84 45 254 2.79 7.1 2053 84 45 254 2.79 7.1 2053 85 45 254 2.79 7.1 2053 87 45 254 2.79 7.2 2053 87 45 254 2.79 7.3 2053 87 45 254 2.79 7.4 2053 87 45 254 2.79 7.5 2053 87 45 254 2.79 7.6 2063 87 45 254 2.79 7.7 2053 87 45 254 2.79 7.8 2053 87 45 254 2.70 7.9 2053 87 45 254 2.70 7.0 217 6.55 7.0 2187 6.55 7.0 2187 6.55 7.0 217 7.0 2.75		343	37	00	~		372
7.5 1773 3.75 40 224 18 0 289 260 37 1.4 0.86 25 1075 7.4 1698 3.79 3.27 8.91 0.45	7.5 1773 21 19 59 2 1773 75 40 234 18 0 289 7.4 3.29 10.17 0.46 4.74 4.74 1698 7.6 4.1 2.05 11.6 0 310 3.79 3.79 3.77 8.91 0.41 5.08 7.0 2184 4.59 3.70 11.87 0.43 7.0 217 7.0 2184 91 4.54 17 5.9 20 0 276 7.1 2053 84 4.54 17 0.51 0.43 3.56 7.1 2053 84 4.54 17 0.51 0.43 3.56 7.1 2053 84 4.54 17 0.51 0.43 7.5 7.1 2053 84 4.54 17 0.51 0.43 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5	5	19.6	09.0				
7.5 1773 75 40 234 18 0 289 289 260 37 1.4 0.84 25 1075 7.4 1698 76 41 205 16 0.41 0.45 0.85 0.85 0.83 0.60 37 1.4 0.84 25 1075 7.5 2184 4.29 3.70 11.87 0.43 0.43 0.21 0.21 0.21 0.01 0.01 0.02 0.2 0.30 0.03 0.03 0.03 0.03 0.03	7.5 1773 75 40 234 18 0 289 7.4 1698 3.74 3.29 10.17 0.46 4.74 7.0 2184 4.54 3.37 8.91 0.41 5.08 7.0 2184 4.54 3.45 12.13 0.43 0.217 7.1 2053 84 45 12.13 0.43 0.27 7.2 2053 84 45 12.13 0.43 0.27 7.3 2053 84 5.5 12.13 0.43 0.25 7.4 2053 84 5.5 12.13 0.43 0.25 7.5 2053 84 5.5 12.13 0.43 0.45 7.6 2053 84 5.5 12.13 0.43 0.45 7.7 2053 84 5.5 12.13 0.43 0.45 7.8 254 255 12.25 7.9 2053 84 5.5 12.13 0.43 0.55		20	6			1171	
7.4 1698 776 4.19 10.17 0.46 4.74 6.00 7.33 0.60 7 1121 7.5 1698 776 4.1 5.00 11.04 0.41 0.41 0.41 0.01 0.41 0.01 0.41 0.4	7.4 1698 7.29 10.17 0.46 4.74 7.1 2083 8.25 7.0 2184 9.1 2.0 3.0 3.0 3.0 3.7 8.91 0.41 5.08 7.0 2.18 7.18 7.18 7.18 7.18 7.18 7.18 7.18 7		260		7,0	2		352
7.4 1698 76 41 205 16 0 310 296 233 6.2 0.4 0.76 18 1040 7.1 2083 486 45 12.13 0.41 0.21 0.287 289 3.69 0.9 1.8 0.08 25 1283 7.0 2184 91 42 279 17 0 217 306 398 2.0 1.0 0.76 22 1370 7.1 2053 84 45 254 0.51 0.51 0.51 0.51 0.52 0.3 1.265 7.1 2053 8 4 45 254 0.51 0.51 0.51 0.52 0.3 1.25 0.3 1.25 7.2 2053 8 5 5 5 5 12.13 0.43 0.51 0.52 0.3 1.52 0.03 1.5 0.55 12.83 7.2 2053 8 6 5 6 5 5 1.283 0.43 0.51 0.51 0.51 0.52 0.03 1.5 0.55 12.83 7.3 2053 8 6 5 6 5 5 1.283 0.43 0.51 0.51 0.51 0.52 0.52 1.285 7.4 2055 8 6 5 5 1.285 0.55 0.55 0.55 0.55 0.55 0.55 0.55 0.	7.04 1698 3.79 3.37 8.91 0.41 5.08 310 310 310 310 310 310 310 310 310 310		7.33					
7.4 1698 3.79 3.37 8.91 0.41 5.08 6.16 6.57 0.10 1.04 0.76 18 1040 7.1 2083 4.29 3.70 11.87 0.43 0.43 0.287 0.28 10.41 0.01 1.08 0.08 25 1283 7.0 2184 91 4.5 12.13 0.43 0.43 0.55 0.35 11.22 0.03 1.0 0.76 22 1370 7.1 2053 84 4.5 12.13 0.43 0.51 0.276 6.35 9.64 0.27 1.0 0.92 22 1234 7.1 2053 84 4.5 12.13 0.43 0.51 0.276 305 9.64 0.27 1.0 0.92 22 1234 7.2 2053 84 5.5 12.13 0.43 0.51 0.52 0.35 9.64 0.27 1.0 0.92 22 1234 7.1 2053 84 5.5 12.13 0.43 0.51 0.52 0.35 9.64 0.27 1.0 0.92 22 1234	7.04 1698 76 3.37 8.91 0.41 5.08 310 310 310 310 310 323 2.0 54 2 2.8		39	3	_		1121	
7-1 2083 4-29 3-37 8-91 0-41 5-08 6-16 6-57 0-10 1 1045 7-1 2083 4-29 3-70 11-87 0-43 0-43 0-28	7.1 2083 86 45 273 17 0 287 7.0 2184 91 4.5 12.13 0.43 4.70 7.0 2184 45 12.13 0.43 3.56 7.1 2053 84 45 254 20 0 276 7.1 2053 84 5 254 20 0 276 7.1 2053 87 0.5 11.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		233		_	7		358
7-1 2083 486 455 273 17 0 287 289 369 0.9 1.8 0.08 25 1283 7-0 2184 91 42 279 17 0 217 306 398 2.0 1.0 0.76 22 1370 7-1 2053 84 45 45 12.13 0.43 0.43 0.51 0.55 0.37 11.22 0.03 7-1 2053 84 45 45 12.13 0.43 0.43 0.51 0.55 0.55 0.03 1.0 0.76 22 1370 7-1 2053 84 45 5 12.13 0.43 0.51 0.55 0.55 0.03 1.0 0.76 22 1370 7-1 2053 84 45 5 254 20 0 276 305 342 17 1.1 0.92 22 1234 7-1 2053 85 50 50 50 50 50 50 50 50 50 50 50 50 50	7.1 2083 486 45 12.73 1.7 0 287 4.70 2.89 3.70 11.87 0.43 4.70 2.87 7.0 2.84 4.54 3.45 12.13 0.43 0.43 3.56 7.1 2053 84 45 25 19 11.04 0.51 4.52 7.5 1.9 3.70 11.04 0.51 4.52 7.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1		6.57	0.10				
7-1 2083 486 45 3-70 11.87 0.43 0.43 0.602 10.41 0.001 1.88 0.08 25 1283 7-0 2184 4.54 3.45 12.13 0.43 0.43 0.217 306 398 2.0 1.0 0.76 22 1370 7-1 2053 84 45 425 12.13 0.43 0.43 0.27 7-1 2053 84 45 22 11.04 0.51 0.51 0.52 0.31 1.01 0.92 22 1234 7-1 2053 84 45 5 254 20 0 276 305 342 17 1.01 0.92 22 1234 7-1 2053 84 45 5 254 20 0 276 305 342 17 1.01 0.92 22 1234 7-1 2053 84 45 5 254 20 0 276 305 342 17 1.01 0.92 22 1234 7-1 2053 84 45 5 254 0.51 0.51 0.51 0.51 0.51 0.51 0.51 0.51	7.1 2083 4.86 3.70 11.87 0.43 4.70 287 7.00 2184 4.59 3.70 11.87 0.43 0.43 4.70 22 7.70 11.87 0.43 7.70 7.00 2184 4.54 3.45 12.13 0.43 7.55 7.10 217 7.10 21		37	7			1045	
7.0 2184 91 4.29 3.70 11.87 0.43 4.70 6.02 10.41 0.01 1248 7.0 2184 4.54 3.45 12.13 0.43 0.43 3.56 6.37 11.22 0.03 1.0 0.76 22 1370 7.1 2053 84 45 254 2.00 276 305 342 17 1.10 0.92 22 1234 7.2 2053 84 45 254 2.00 276 305 342 17 1.10 0.92 22 1234 7.1 2053 8.4 45 2.5 6.35 9.64 0.27 1.10 0.92 22 1234 7.2 2053 8.4 4.5 2.5 6.35 9.64 0.27 1.10 0.92 22 1234	7.0 2184 4.29 3.70 11.87 0.43 4.70 7.0 2184 4.54 3.45 12.13 0.43 3.56 7.1 2053 84 45 25 7.0 11.04 0.51 4.55 2.2 17 3.70 11.04 0.51 4.55 2.2 19 3.70 11.04 0.51 4.55 2.2 2.2 2.2 2.3 2.3 2.3 2.3 2.3 2.3 2.3		369				128	400
7.0 2184 91 42 279 17 0 217 306 398 2.0 1.0 0.76 22 1370 2053 84 4.5 12.13 0.43 0.43 0.217 30 3.56 6.37 11.22 0.03 1.0 0.76 22 1370 1.265	7.0 2184 91 42 279 17 0 217 7.1 2053 84 45 12.13 0.43 0.43 3.56 17 7.1 2053 84 45 254 0.51 0.45 17 7.1 2053 84 5.20 11.04 0.51 0.52 19 1.57 0.51 0.52 19 1.57 0.51 0.52 19 1.57 0.51 0.51 0.52	6.02	10.41		_	_		
7.0 2184 91 42 279 17 0 217 306 398 2.0 1.0 0.76 22 1370 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.	7.0 2184 491 42 279 117 0 217 2 217 2 217 2 217 3 545 12 12 13 0 443 1 2 556 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		64		_	_	1248	
7-1 2053 84 45 12-13 0-43 3-56 6-37 11-22 0-03 1265 7-1 2053 84 45 254 20 0 276 305 342 17 1-1 0-92 22 1294 7-1 2053 84 45 0-51 20 276 305 342 17 1-1 0-92 22 1294 7-1 22 1294 22 31 46 0-1 1-1 0-92 22 1294 1227	7.1 2053 84 45 12.13 0.43 3.56 7.1 2053 84 45 254 20 0 276 22 19 11.04 0.51 4.52 17 2.2 19 15.70 11.04 0.51 4.52		398		-			400
7-1 2053 84 45 254 20 0 276 305 342 17 1-1 0.92 22 1234 7-1 2053 84 45 22 134 7-1 2053 84 45 1004 0.51 7-1 20 1004 0.51 7-1 1004	7.1 2053 84 45 254 20 0 276 4.19 3.70 11.04 0.51 4.52 12 22 13 4.52 19 11.04 0.51 4.52	6.37	11.22				_	
7-1 2053 84 45 254 20 0 276 305 342 17 1-1 0.92 22 1234 20 0 276 305 342 17 1-1 0.92 22 1234 22 1234 22 1334 3-70 11.04 0.51 22 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	7.1 2053 84 45 254 20 0 276 4.19 3.70 11.04 0.51 4.52 22 19 15.7 3	30	53		_		1265	
3.70 11.04 0.51 4.52 6.35 9.64 0.27 12.27 2.2 3.1 4.6 0.27	3.70 11.004 0.51 4.52 19 57 3		342		_		1	395
19 57 3 22 31 46 1	22 22		99.6			_	_	
			9 7	1		_	1227	
					_			
					_			

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES TABLE D-2

-	
ADDI	(Z)
AND	INCE
CNS	PROV
AN	AGE
EMMINA	DRAINAGE
DE.	
Jeical	DIEGO
2000	SAN

Gage ht.(ft)	1	Coliforma		Constituent	Constituents, in parts per million	ser million		Dissolved	oxygen	Analyzed
Flow (cfs)	E D	MPN/mt	PO4	Syndote	NH4	Turbidity	Phenol	Parts per	Percent	py p
tation	Streem name and station number		SAN DIEGO RIVER	RIVER			65			
AT OLD MISSION DAM										
11-13-63 None 1215 2 est. Slightly turbid; some f	7.4 Foam; algae	230	0.78	1.1		04		9.9	69	DWR
1-7-64 None 1430 2 est. Slightly turbid; some f	7.4 foam; insects	130	3.6	1.72		50		* 7° * 7	147	DWR
3-10-64 1.49 1120 8 est. Clear; much green algae	7.8 throughout	240 240 stream; fish	5.1 1.46 fish and insects observed	1.46 s observed		4 25		න න	1 8	DWR
5-13-64 None 1425 2 est. Slightly turbid; some 6	7.h	230	9.6	1.1		37		9.6	109	DWR
None 0.05 est.	7-9-64 None 7.2 62 1050 0.05 est, 23 311ghtly turbid; green algae throughout stream	62 23 ghout stream			16	100		7.6	93	DWR
None Co.15 est.	7.6 in green alg	9-15-64 None 7.6 23 1335 0.15 est, 620 Clear; little foam; much green algae on bottom;	0.42	1,000		92		9.6	115	DWR

MINERAL ANALYSES OF SURFACE WATER

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

SAN DIEGO DRAINAGE PROVINCE (Z)

<u>e</u>	Evap1059C CaCO3		581	550	727	478	999	607	
60			1745	1550	1295	1340	1563	1690	
constituent per million	S.11 ca S.02		21	19	11	18	37	30	
Mineral	Boron		99•0	0.78	94.0	0.65	0 • 78	0 • 78	
	Fluo-		6.0	0.7	7 • 0	0	0 • 8	0 • B	
	trate NO3		5 • 0	15 0 • 24	17 00.27	2.0	0 • 2	18 0.29	
million per million tance value	Chio-	65	578 16•30 55	436	350	355	490	512	
0	Sulfate SO ₄		288	341	304	296 6.16 29	5.04	301	
nten	Bicar - bonate HCO ₃		437	354 5.80	303	319 5.23	520 8.52 31	458 7.51 26	
equive perce	Carbon- ofe CO3	24	0	0	0	0	0	0	
ë	Potas-	SO RIVE	0.28	0.31	0.26	0.23	0.18	0.20	
constituents	Sod . u	SAN DIEGO RIVER	415	335	270 11.74 55	274	348 15.13 57	368 16.00 56	
Mineral co	Magne- stum Mg	0)	5.67	5.51	54 4.44	58	5.67	5.84	
2	Calcium		119 5.94	110	101 5.04	4.79	113	126	
Specific conduct-	, 0		2874	2381	1988	2047	2536	2648	
	Ŧ a	umber	7.8	7.3	7.4	7.2	7.2	7.3	
Temp	sompled In OF	station r DAM	79	54	58	72	4	78	
	DAIE SAMPLEU	Stream name and station number AT OLD MISSION DAM	11-13-63	1- 7-64	3-10-64	5-13-64	7- 9-64	9-15-64	

MINERAL ANALYSES OF SURFACE WATER FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES SAN DIEGO DRAINAGE PROVINCE (Z) TABLE D-2

Flow(cfs)	X CREEK 0.90	425 Phenoi	Parts per million 16.6	Percent saturation	by b
8.0 620 0.68 8.0 4,5 6.0 1,5 6.0 230 7.6 6.23 7.6 2,400 7.6 23 7.6 23 7.6 23 7.6 23 7.6 23 7.6 23 7.6 23 8.0 0.3 8.0 0.3	у с векк		16.6	171	
None None	06.0	A & 30 4 25 30 55	16.6	171	
None 6.25 est. None 7.6 620 0.10 est. None 7.6 620 0.10 est. None 0.25 est.		4 25 30 4 25 4 30	0 14.6		DWR
None 0.10 est. 7.6 620 81 is stream None 0.25 est. 7.6 2,400 0.25 est. 7.6 23 0.25 est. None None None None None Small fish; some foam; Arsenic = 0.0 ppm		4 25	14.6	0	DWR
None None None None None None None None		425		139	DWR
None 0.25 est, 23 6.25 est, None None 0.25 est, 320 0.25 est, 330 0.25 est, 330 0.30 0.27 est, 330 0.30 0.30		_	12.4	133	DWR
7.3 4.6 0.3 230 5 some foam; Arsenic = 0.0 ppm		30	12.0	152	DWR
	L** 0	A 50	9.	102	DWR

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
SAN DIEGO DRAINAGE PROVINCE (Z)

	Total hordness CaCO ₃			2537	2656	2046	2430	2714	2893
lion	TOS Total Evap180°C hordness Computed CaCOs			7900	8060	6000	8300	7076	20 20
sonstill er mi	Sili- co SiO ₂			15	12	10	12	60	Φ
Mineral constituents parts per million	Boron			0 . 88	0 • 98	0.76	1.00	1.20	1.25
	Fluor			6 • 0	0 . 0	0.5	0 • 0	9.0	3.6
	rote NO3			0 • 0	20	10	3.7	14 0.23	0.00
million	Chio-		658	3440 97•01 81	3575 100.82 81	2780	3405 96.02 83	3936 111.00	4230 119•29 84
million per sactance	Sulfate SO ₄			732	792 16.49	674	764	890 18.53	915 19•05 13
ports per equivalents percent re	Bicar - bonate HCO ₃			427	395	386 6.33 6	267	216 3.54	2.62
por 1s equivo	Carbon- ote CO3		CREEK	0	0	0	0	0	0
ë	Potas- sium K			0.13	0.13	0.10	0.13	0.15	0 . 1 8
Mineral constituents	E n po S		SPRING VALLEY	1575	1650 71.74 57	1300	1573 68.39 58	1840	1900 82.61 59
ineral co	Mogne- sium Mg		S	23.60	322 26.48 21	249 20•48 21	23.52	324 26.65 20	331 27•22 19
2	Calcium			543 27-10 23	533 26.60 21	409	502 25.05 21	553 27.59 21	613 20.59 22
Specific conduct-	mhos at 25°C)			11161	10989	8130	10383	11990	13099
	H	number		-	7.9	7.8	7.9	7.2	r 0
Temp	sompled in ^o F	1		63	58	26	99	82	77
	UAIE SAMPLED	Stream name and station	NEAR LA PRESSA	11-13-63	1- 7-64	3-10-64	5-14-64	79-6 -1	9-15-64

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER
FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES

SAN DIEGO DRAINAGE PROVINCE (Z)

Anolyzed	by b			DWR	DWR	DWR	DWR	DWR	DWR
oxygen	Percent			125	04	418	166	268	オレ
Dissolved	Parts per million			12.2	† • †	80	14.8	25.2	0
	Phenol	950							
r million	Turbidity	9		425	< 25	4 25	425	54	02
Constituents, in parts per million	NH4								
Constituent	Syndels	RIVER		2.5	1.56	1.46		2.0	
	PO4	SAN DIEGO RIVER		7.4	3.7	240 5.1 1.46 240 stream; fish and insects observed		5.4 served	
Coliforma	MPN/ml			1,300	23 o o o o o o	240 240 stream; fis	83.33	0.60 5.4 0.60 mall fish observed	13
7		number	0	7.8 algae	8.0 m algae; insects	7.8 throughout	8.0 s some foam	7.4 flow; foam; small	7.3
Gage ht.(ft)	Flow (cfs)	Stream name and station number	NEAR MISSION GORGE ROAD	11-13-63 1.28 1245 4 est. Clear; much foam; much	1-7-64 1.32 1515 5 est.	3-10-64 1.49 1120 8 est. Clear; much green alge	5-13-64 1.30 8.0 1455 1.5 est. Clear; much green algae; some foam	7-9-64 1.01 1125 0.05 est. Slightly turbid; low fi	9-15-64 0.72 7.3 1310 Yellowish color; Arsende = 0.0 ppm
Date	Remorks	Streem nome	NEAR MISSI	11-13-63 1245 Clear; mud	1-7-64 1515 Clear; mud	3-10-64 1120 Clear; mud	5-13-64 1455 Clear; mud	7-9-64 1125 Slightly t	9-15-64 1310 Xellowish

MINERAL ANALYSES OF SURFACE WATER

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER
SAN DIEGO DRAINAGE PROVINCE (Z)

П	Total hordness 0s CaCO ₃		689	695	487	483	961	882	
lion	Evap105°C hordness Evap105°C 05 Computed CoCO3		1905	1580	1310	1320	2327	2128	
consti er mi	S:11-		34	12	9	21	30	53	
Mineral constituents parts per million	Boron		99•0	0.78	79.0	69.0	0.78	0.78	
	Fluo-		6.0	0.7	0.5	0.7	1 • 0	0	
	rote NO3		15 0 . 24	11 0.18	10 0.16	3.0	24 0.39	19 0•31	
million per million tance value	Chlo- ride Cl	65C	598 16.86 55	450	368 10.38 48	356	708 19.97 56	633 17.85	
00	Sulfate SO ₄		358	349	296	299	391	366	
parts per equivalents percent re	Bicar - bonate HCO ₃		386	346	312 5.11	306	4444	476 7.80 23	
pod	Carbon- ate CO3	œ	0	0	0	0	0	0	
i.	Potas Sium K	O RIVER	0.31	11 0.28	0.23	0.23	0.15	0.13	
constituents	Sod . um	SAN DIEGO	395 17-17 55	335	275 11.96	264 11.48 54	364	371	
Mineral co	Magne- sium Mg	S	6.58	5.59	4.85 22	58 4.77 22	131 10.77	110	
×	Colcium		144	116 5.79	98 4.89 22	98 4.89 23	169	172 8.58 25	
Specific conduct-	mhos at 25°C)		2959	2421	2037	2028	3229	3113	
	Hd	and and	7 . 8	8 . 2	7 • 7	7.6	7.3	7.2	
Temp	when sampled in ° F	station number	63	r R	26	7.1	78	8	
	DATE SAMPLED	Stream name and station num NEAR MISSION GORGE ROAD	11-13-63	1- 7-64	3-10-64	5-13-64	79-6 -1	9-15-64	

FIELD OBSERVATIONS, BACTERIOLOGICAL DETERMINATIONS, AND ADDITIONAL CHEMICAL ANALYSES SAN DIEGO DRAINAGE PROVINCE (Z) MINERAL ANALYSES OF SURFACE WATER TABLE D-2

Analyzed				DWR	DWR	DWR	DWR	DWR	DWR
oxygen	Percent						17		
Dissolved oxygen	Parts per million						1.4		
	Phenoi								
er million	Turbidity	99					700		
Constituents, in ports per million	NH4						18		
Constituent	Syndets	RIVER					13.4		
	PO4	TIA JUANA RIVER					7.3		
Coliforma	MPN/ml						70,000 + 7.3 7,000 + atream; sewage odor		
21412	Hd DIO	number	RY	flow	flow	flow	7.8 and trash in	flow	flow
Gage ht.(ft)	Flow (cfs)	Stream name and station number	AT INTERNATIONAL BOUNDARY	Dry no	Dry no	Dry no	1100 None 1100 0.1 est. Turbid; small organisms	Dry no	Dry no
Dote	Remarks	Stream name	AT INTERNAT	11-13-63 0830	1-7-64	3-10-64	5-14-64 1100 Turbid; smo	7-9-64	9-16-64 1015

California Department of Public Health, Division of Laboratories, Los Angelos, California.

b. Analysis made by Department of Water Resources (DAR); Los Angeles Department of Water and Power (LADAP); Los Angeles County usually because the control of the county of the Tests made by agency reporting analysis. Tests on samples collected in pairs by Department of Water Resources were made by a.

SAN DIEGO DRAINAGE PROVINCE (Z)

TABLE D-2
MINERAL ANALYSES OF SURFACE WATER

SAN DIEGO DRAINAGE PROVINCE (Z)

	Temp		Specific conduct-	2	Mineral co	constituents	Ë	por	parts per equivalents percent rec	millio	million			Mineral constituent parts per million	consti	constituents in per million	
DATE SAMPLED	when sompled in °F	Н	ance (micro- mhos at 25°C)	Colcium	Magne- sium Mg	Sodius	Potas -	Corbon- ate CO ₃	Bicar - bonate HCO ₃	Sulfate SO ₄	Chlo- ride Cl	NI -	Fluo-	Boron	Sili- ca SiO ₂	Evapl80°C hardness Evapl05°C CaCO3	Total hardness CaCO ₃
Stream name and station number at INTERNATIONAL BOUNDARY	station of	DARY			-	TIA JUANA RIVER	A RIVE	C.			99						
11-13-63	-	1	-	1	1	-	1	Ī	-	1	1	1	1	1 1	1		
1- 7-64	1	1	1	}	ł	8	1	1	1	1	1	1	1	1	1		
3-10-64	1	1	1	1	8	1	ļ	1	1	1	1	1	ł	1	1		
5-14-64	77	7.4	3546	116 5•79 15	4.55	600	38	0	1004	1.17	760	3.1	0 8	2.10	18	2310	516
49-6 -L	1	1	1	1	1	1	-	1	1	1	1	1	1	}	1		
9-16-64	1	1	1	1	1		1	1	1	ŀ	1	1	1	1	1		

TABLE D-2

MINERAL ANALYSES OF SURFACE WATER

The stations below were dry on the dates and times shown DRY STATIONS:

stal I	Central Coastal Drainage Province (T) Cuyama River, near Garey	San Luis Rey River,	San Diego Drain River,	San Diego Drainage Province (Z) River, San Dieguito	ovince (Z) San Dieguito River, below
		: near Pala (Sta. No. 62) Date Time (No. 62) Time (PST)	San Pasqual Vall	San Pasqual Valley (Sta. No. 64) Date Time (PST)
	1330	11-12-63	1530	11-12-63	1700
	1310	1- 6-64	1415	1- 6-64	1605
	1150	3- 9-64	1245	3- 9-64	1520
	0730	5-15-64	1025	5-14-64	1350
	0730	7-10-64	1145	7- 9-64	1650
	0845	9-18-64	0835	9-16-64	1350
	9845				
	1355				
	0815				
	1115				
	1515				
	1005				

TABLE D-3
RADIOASSAYS OF SURFACE WATER

CENTRAL COASTAL DRAINAGE PROVINCE (T)

5	Station	Water Year 1963 - 1964	Cuyama River near Garey	Santa Ynez River at Cachuma Reservoir	Santa Ynez River near Solvang 45a	
	Date	1964	5- 4	5- 4	5- 4	
	Dissolved Alpha		Dry Dry	- 0.36 + 2.85 - 0.73 + 1.61	- 0.72 + 4.41 Dry	
Picocuries	Solid Alpha			- 0.28 + 0.44 1.97 + 1.35	0.51 + 0.89	
per Litera	Dissolved Beta			8.46 + 12.52 - 13.00 + 12.43	- 2.79 + 13.19	
	Solid Beta			- 0.16 + 8.18 - 5.75 ± 8.61	- 1.08 ± 8.21	

a. Deviations reported at the 95 percent confidence level.

RADIOASSAYS OF SURFACE WATER TABLE D-3

LOS ANGELES DRAINAGE PROVINCE (U)

	Sta			Picocuries	per Liter ^a	
Station	No	Date	Dissolved Alpha	Solid Alpha	Dissolved Beta	Solid Beta
Water Year 1963 - 1964		1964				
Matilija Creek above Matilija Dam	q5h	5-6	- 3.78 + 5.96	- 0.50 + 0.62	- 10.28 + 12.83 - 5.29 + 11.59	-10.84 + 8.24 - 4.86 + 8.46
Santa Clara River at Los Angeles-Ventura County Line	91	2.6	- 5.67 + 11.12	0.78 + 1.26	- 34.37 + 83.76 20.16 + 32.83	- 3.24 + 9.07 2.65 + 8.89
Santa Clara River near Santa Paula	46а	7-6	0.63 + 1.45 54.00 + 63.94	- 0.50 + 0.62 -12.99 + 8.45	- 7.02 + 12.13 3.76 + 18.19	- 5.31 + 8.51
Piru Creek near Piru	116с	5-6	- 7.63 + 3.74	0.62 + 1.06	- 14.63 + 13.61 25.96 + 16.75	- 4.50 + 8.73 - 0.35 ± 3.94
Sespe Creek near Fillmore	р91	5-6	3.94 + 6.70	- 0.40 + 0.20	8.40 + 14.90	1.89 + 8.54
Santa Paula Creek near Santa Paula	16е	5-5	0.91 + 1.50	- 0.48 + 0.28 0.79 + 0.97	14.18 + 12.21	0.46 + 8.21
Los Angeles River at Figueroa Street	747	5-6	- 26.69 + 11.70	- 0.39 + 0.20 - 0.30 + 2.84	- 37.22 + 15.98 - 5.94 + 13.16	28.93 + 9.56 - 8.90 + 7.42
Los Angeles River at Pacific Coast Highway	148	5-6	141.38 + 209.58 - 22.22 + 7.85	5.11 + 2.89	-128.00 + 36.96 9.78 + 66.94	- 5.67 + 8.87 10.09 <u>+</u> 9.31
Rio Hondo at Whittier Narrows	64	5-6	6.07 + 7.99 Dry	0.77 ± 1.41	34.62 + 15.19	h.81 ± 9.01
Mission Creek at Whittier Narrows	49а	5-6	Dry Dry			
a. Deviations reported at the 95 percent confidence level.	e 95 pe	rcent cc	nfidence level.			

TABLE D-3
HADEOASSAYS OF SUBFACE WATEH
LOS ANGELES DISCUSSE HOUNGE (U)

TABLE D-3
RADIOASSAYS OF SURFACE WATER
LOS ANGELES DRAINAGE PROVINCE (U)
(continued)

The second secon

	Colorado River Aqueduct 69 Sec Page 168 for Radiological Assay	Ventura River near Ventura 61 5-5 1.20 + 4.94 0.43 + 0.89 4.01 + 13.09 17.59 + 9.10 0.57 + 5.41 0.46 + 1.07 0.53 + 14.28 96.76 +	San Gabriel River at Azusa 50d 5-6 - 1.55 + 3.29 0.44 + 1.15 - 39.52 + 12.76 2.26 + Powerhouse 9-14 - 0.36 + 4.53 0.63 + 0.96 25.64 + 11.47 6.12 +	20.70 + 14.38 12.60 + 14.54 - 3.80 + 11.59 39.52 + 12.76 25.64 + 11.47 4.01 + 13.09 0.53 + 14.28	- 4v v vo or .	Dissolved - 2.40+ - 3.68+ - 1.55+ - 0.36+ - 0.36+ - 0.57+ - 0.56+ - 0.57+ - 0.56+ - 0.57+ - 0.56+ - 0.56+ - 0.57+ - 0.56+ - 0.	25-6 9-14 9-14 5-5 9-1 8ee	од ф ф ф ф ф ф ф ф ф ф ф ф ф ф	Water Year 1963 - 1964 Rio Hondo above Spreading Grounds San Gabriel River at Whittier Narrows San Gabriel River at Azusa Powerhouse Ventura River near Ventura colorado River Aqueduct near La Verne Los Angeles Aqueduct near San Fernando, Upper Van Norman Inlet
		69 See Page 168	61 5-5 1.20 + 4.94 0.43 + 0.89 4.01 + 13.09 9-1 0.57 + 5.41 0.46 + 1.07 0.53 + 14.28		iological Assay	Page 169	See	70	Los Angeles Aqueduct near San Fernando, Upper Van Norman Inlet
a 50d 5-6 - 1.55 + 3.29 0.44 + 1.15 - 39.52 + 12.76 a 61 5-5 1.20 + 4.94 0.43 + 0.89 b 70 See Page 168 for Radiological Assay	50d 5-6 - 1.55 + 3.29	at Azusa 50d 5-6 - 1.55 + 3.29 0.44 + 1.15 - 39.52 + 12.76 2.26 9-14 - 0.36 + 4.53 0.63 + 0.96 25.64 + 11.47 6.12		11.59	0.10 +	5.82 + Dry	5-6	20	
a 50d 5-6 - 5.82 + 2.33 - 0.10 + 0.85 3.80 + 11.59 a 50d 5-6 - 1.55 + 3.29 0.44 + 1.15 - 39.52 + 12.76 a 61 5-5 1.20 + 4.94 0.43 + 0.89 4.01 + 11.47 69 See Page 168 for Radiological Assay 70 See Page 169 for Radiological Assay	at Azusa 50d 5-6 - 5.82 + 2.33 - 0.10 + 0.85 3.80 + 11.59 at Azusa 50d 5-6 - 1.55 + 3.29 0.44 + 1.15 - 39.52 + 12.76 5.00 9-14 - 0.36 + 4.53 0.63 + 0.96 25.64 + 11.47 5.00 5.63 + 10.94 0.43 + 0.89 0.53 + 14.28	at at Azusa 50d 5-6 - 5.82 \pm 2.33 - 0.10 \pm 0.85 3.80 \pm 11.59 at Azusa 50d 5-6 - 1.55 \pm 3.29 0.44 \pm 1.15 - 39.52 \pm 12.76 9-14 - 0.36 \pm 4.53 0.63 \pm 0.96 25.64 \pm 11.47	at 50 5-6 - 5.82 + 2.33 - 0.10 + 0.85 3.80 + 11.59	14.38	0.29	2.40 + 3.68 +	5-6	96h	Rio Hondo above Spreading Grounds
49b 5-6 - 2.40 + 1.11	at Azusa 50d 5-6 - 2.40 + 1.11 0.29 + 1.11 20.70 + 14.38 at Azusa 50d 5-6 - 5.82 + 2.33 - 0.10 + 0.85 3.80 + 11.59 at Azusa 61 5-5 1.20 + 4.94 0.63 + 0.96 25.64 + 11.47 $0.85 \times 10.96 \times 10.99 \times 10.9$	at Azusa 50d 5-6 - 1.55 + 3.29 0.44 + 1.15 0.29 + 1.15 0.96 0.96 0.96 0.96 0.96 0.96 0.96 0.96	st 50 5-6 - 2.40 + 1.11 0.29 + 1.11 20.70 + 14.38 at 50 5-6 - 5.82 + 2.33 - 0.10 ± 0.85 3.80 ± 11.59				1964		
a 50d 5-6 - 1.55 + 2.33 - 0.10 + 0.85 3.80 + 11.47 a 50d 5-6 - 1.55 + 3.29 0.44 + 1.15 - 39.52 + 12.76 b 5-6 - 1.55 + 3.29 0.44 + 1.15 - 39.52 + 12.76 c 5-6 - 1.55 + 3.29 0.44 + 1.15 - 39.52 + 12.76 c 5-6 - 1.57 + 4.94 0.43 + 0.89 0.53 + 11.47 c 5-6 - 1.57 + 5.41 0.46 + 1.07 c 5-6 - 1.58 + 1.94 0.48 + 1.05 c 5-6 - 1.57 + 5.41 0.48 + 0.89 0.53 + 11.428 c 5-6 - 1.58 + 1.94 0.48 + 1.07 c 5-6 - 1.57 + 5.41 0.46 + 1.07 c 5-6 - 1.58 + 1.94 0.48 + 1.07 c 5-6 - 1.58 + 1.94 0.48 + 1.05 c 5-6 - 1.58 + 1.94 0.48 + 1.05 c 5-6 - 1.58 + 1.94 0.48 + 1.07 c 5-6 - 1.58 + 1.94 0.48 + 1.05 c 6-70 + 14.38 c 70 - 14.38 c 70 - 14.38 - 11.45 c 70 - 14.38 c	1964 Total Alpha	1964 Teading 49b 5-6 - 2.40 + 1.11 Teading 49b 5-6 - 5.82 + 2.33 Teading 50 5-6 - 5.82 + 2.33 Teading at Azusa 50d 5-6 - 1.55 + 3.29 Teading 50 5-6 - 1.55 + 3.29 Teading 50 5-6 - 1.55 + 3.29 Teading 6-14 1.15 - 39.52 + 11.79 Teading 6-14 - 0.36 + 4.53 Teading 750 6 - 1.55 + 1.11 Teading 750 6 - 1.55 + 1.55 Teading 750 6 - 1.55 + 1.55 Teading 750 6 - 1.55 + 1.55 Teading 750 6 - 1.55 + 1.55	1964 1964 1964 1964 1964 1964 1964 1964 1964 1964 1964 1964 1964 1964 1964 1966				Date	4	Station

a. Deviations reported at the 95 percent confidence level.

RADIOASSAYS OF SURFACE WATER

TABLE D-3
RADIOASSAYS OF SURFACE WATER
LOS ANGELES DRAINAGE PROVINCE (U)
(continued)

	per liter ⁸	Gross Beta	10.3 + 2.6	10.2 + 2.6	13.7 ± 2.6	15.3 + 2.6	24.7 + 2.6	13.0 ± 2.6	1.1 + 2.6	7.8 + 2.6	35.0 + 2.6	15.3 + 2.6	15.4 + 2.6	15.2 + 2.6		
	Picocuries per liter®	Gross Alpha	5.1 + 0.7	3.0 + 0.7	3.7 ± 0.7	2.4 + 0.7	3.1 ± 0.7	1.9 + 0.7	1.6 + 0.7	3.4 + 0.7	3.6 ± 0.7	5.0 + 0.7	5.3 + 0.7	5.4 + 0.7		
nea)	Date of	Analysis	11-22-63	12-19-63	1- 6-64	2-12-64	3-12-64	4- 7-64	5-28-64	7-14-64	7-17-64	8-13-64	79-11-6	10-11-64		
(contrattage)	d)	ed b	1963	1963	1963	1961	1961	1964	1961	1961	1964	1961	1961	1964		
	Date	Sampled b	October	November	December	January	February	March	April	May	June	July	August	September 1964		
	Source and	Sampling Point	Colorado River Aqueduct	Filtration Plant, La Verne,	Station by	Analyses received from The	of Southern California									

a. Deviations reported at the 90 percent confidence level. b. Monthly composite.

b. Manthly composition

RADIOASSAYS OF SURFACE WATER TABLE D-3

LOS ANGELES DRAINAGE FROVINCE (U) (continued)

Sampling Point	Date Sampled	Beta - Gamma Activity ⁸	Date Sampled	Beta-Gamma Activity	Date Sampled	Beta-Gamma Activity
Upper Van Norman Inlet	10- 7-63	9.5 + 4.1	2-19-64	4.4 + 2.9	49-01-9	6.0 + 3.8
Los Angeles Aqueduct	10-14-63	15.7 + 4.1	2-26-64	9.1 + 4.7	6-17-64	9.5 + 3.9
Station 70	10-21-63	10.6 + 3.3	3- 4-64	13.0 + 4.7	49-42-9	7.8 + 3.8
	10-30-63	10.6 + 4.2	3-11-64	14.3 + 4.5	7-1-64	7.8 + 3.8
Analyses received from	11- 6-63	14.4 + 4.3	3-18-64	14.1 + 4.6	7- 8-64	5.5 + 3.8
Department of Water	11-13-63	12.1 + 4.2	3-25-64	13.7 ± 4.6	7-15-64	7.6 + 3.8
and rower	11-27-63	13.0 + 4.9	4- 1-64	13.5 + 4.6	7-22-64	9.4 + 3.9
	12- 4-63	11.3 + 4.9	4-8-64	10.3 + 4.5	7-29-64	9.8 + 4.0
	12-11-63	9.2 + 4.8	4-15-64	13.8 ± 4.6	8- 5-64	9.0+3.9
	12-18-63	13.1 + 4.6	4-22-64	7.1 + 4.4	8-12-64	10.0 + 3.9
	12-23-63	14.3 + 4.6	4-29-64	12.2 + 4.6	8-25-64	8.8 + 4.0
	1- 2-64	14.1 + 4.6	5- 6-64	9.6 ± 4.5	9- 2-64	9.2 + 3.9
	1-22-64	8.9 ± 4.7	5-13-64	12.4 + 4.5	9-10-67	8.5 + 4.0
	1-29-64	9.2 + 4.7	5-20-64	11.8 ± 4.5	9-16-64	18.6 + 3.7
	2- 5-64	9.8 + 4.7	5-27-64	10.0 + 4.5	9-23-64	14.5 + 3.4
	2-12-64	13.7 + 4.8	6- 3-64	5.1 + 4.3	9-30-64	23.9 + 4.3

a. Piccouries per liter. Deviations reported at the 95 percent confidence level.

TABLE D-3

(W)
PROVINCE (
NAGE PR
IN DRAINAGE
LAHONTAN

	Sta.	4		Picocuries	per Liter®		
Station	o _N	Date	Dissolved Alpha	Solid Alpha	Dissolved Beta	Solid Beta	
Water Year 1963 - 1964		1364					
Mojave River near Victorville	19	7-6	0.39 + 1.58 $0.76 + 1.66$	0.21 + 1.06	9.73 + 12.28	- 2.00 + 10.12	
Mojave River at the Forks	67a	5-7	3.95 + 4.20	- 1.68 + 0.75 0.26 + 0.73	- 5.57 + 13.05 7.29 + 12.53	- 7.75 + 11.24 0.64 + 8.54	*
a. Deviations reported at the 95 percent confidence level.	95 perc	sent con	fidence level.				

TABLE D-3 RADIOASSAYS OF SURFACE WATER

. Devintions reported at the 95 percent confidence level.

TABLE D-3
RADIOASSAYS OF SURFACE WATER

COLORADO RIVER BASIN DRAINAGE PROVINCE (X)

4 6	Sta	4			Picocuries	per Lifera			
Station	o _N	Date	Dissolved	Alpha	Solid Alpha	Dissolved Beta	0	Solid B	Beta
Water Year 1963 - 1964		1964							
Colorado River near Topock, Arizona	54	5-18	2.68 +	2.60	0.88 + 0.42	9.77 + 13.43	п н н н н н н н н н н н н н н н н н н н	7.01 +	11.12
Colorado River below Farker Dam	55	5-19	8.77 +	3.74	0.10 + 1.06	4.81 + 15.90	09	2.54 +	8.40
Colorado River at Yuma, Arizona	99	21-2	- 1.31 +	3.82	- 0.50 + 0.22 - 0.37 + 2.84	20.94 + 14.25	20	4.16 +	8.13
All American Canal at Pilot Knob	56a	5-13	2.04+1+	1.24	1.14 + 1.51	3.98 + 12.53	n &	9.27 + 3.56 +1	9.04
Colorado River below Morelos Dam	56b	5-12	- 0.65 +	2.41	- 0.21 + 0.76 0.07 + 0.73	9.04 + 12.98	8 10	5.77 +	8.97
Colorado River near Blythe	56c	5-19	10.03 +	7.93	0.32 + 0.80	- 5.31 + 14.52 15.08 + 11.21	0 H	1.69	9.00
Colorado River, Lake Havasu at Aqueduct Intake	26d		See Page	173 for	Radiological Assay	Sa y	-		
New River at International Boundary	57	5-11-6	8.01	3.20	0.55 + 1.44	7.77 + 28.40 56.10 + 37.41	0 1	6.35 +	10.80
New River near Westmorland	58	5-11	68.75 +	2.64	1.30 + 1.61	-44.51 + 30.33 168.33 + 238.95	23	3.17 + 2.64 +	8.56
Alamo River at International Boundary	59	5-11	2.16	7.01	3.41 + 5.35	3.36 + 13.10	0.50	1.38 + 9.81 +1	9.21
								1	1

a. Deviations reported at the 95 percent confidence level.

TABLE D-3
RADIOASSAYS OF SURFACE WATER
COLORADO RIVER BASIN DRAINAGE PROVINCE (X)
(continued)

Mater Year 1963 - 1964		Sta				Picocuries	per Liter ^a	
60 5-11 - 1.70 + 3.17 - 0.85 + 2.57 - 1.28 + 22.56 3.48	Station	No	Date	Dissolved	Alpha			
68 5-10 -1.70 ± 3.17 -0.85 ± 2.57 - 1.28 ± 22.56 3.48 68 5-10 0.19 ± 1.49 -0.10 ± 0.80 -0.91 ± 11.07 3.84 68a 5-10 -83.42 ± 258.51 -0.65 ± 0.07 119.79 ± 417.06 ± 0.73 68b 5-10 -83.42 ± 258.51 -0.66 ± 0.97 119.79 ± 417.06 ± 0.73 68b 5-10 5.30 ± 7.25 1.60 ± 2.75 8.11 ± 15.47 20.22 9-7 0.00 ± 91.50 -0.948 ± 1.63 111.90 ± 336.51 10.59 9-7 0.00 ± 4.48 ± 4.17 0.59 ± 1.04 13.24 ± 11.99 2.22	Water Year 1963 - 1964		1964					
68a 5-10 0.19 ± 1.49 - 0.10 ± 0.80 - 0.91 ± 11.07 3.84 ± 1.65 ± 0.39 ± 0.61 - 0.39 ± 0.61 - 0.39 ± 0.61 - 0.39 ± 0.61 - 0.39 ± 0.61 - 0.39 ± 0.61 - 0.39 ± 0.61 - 0.39 ± 0.61 - 0.39 ± 0.61 ± 0.97 119.79 ± 417.06 € 0.73 ± 0.00 ± 91.50 - 0.48 ± 1.63 111.90 ± 336.51 10.59 ± 0.59 ± 0.61 ± 0.59	Alamo River near Calipatria	09	5-11	1.70	3.17	0.85 +	1.28 + 7.02 +	3.48 + 12.42 2.64 + 7.75
68a 5-10	Whitewater River near Whitewater	89	5-10	0.19 +	3.41	- 0.10 + 0.80	3.50 +	+1+1
68b 5-10 5.30 + 7.25 1.60 + 2.75 8.11 + 15.47 20.22 + 9-7 4.48 + 4.17 0.59 + 1.04 13.24 + 11.99 2.22 + 2.22 + 2.24 13.24 + 11.99 2.22 + 2.24 13.24 + 2.24 13.24 + 2.25 13.24 +	Salton Sea at Salton Sea State Park	68 a	5-10	+ +	258.51	0.66	119.79 + 417.06	6.73 ± 9.14 10.59 ± 9.04
	Whitewater River near Mecca	989	5-10	5.30 +	7.25	+1+1	+1+1	20.22 + 12.18

a. Deviations reported at the 95 percent confidence level.

RADIOASSAYS OF SURFACE WATER TABLE D-3

The personal countilitations bewell.

COLORADO RIVER BASIN DRAINAGE PROVINCE (X) (continued)

	(population)		Picocuries	Picocuries per litera	
Source and Sampling Point	Sampled	Analysis	Gross Alpha	Gross Beta	
Colorado River	10-1-63	10-20-63	4.0 + 0.7	17.4 + 2.6	1
Lake Havasu at Aqueduct Intake, ftation 56d	11-5-63	11-25-63	2.6 + 0.7	15.0 + 2.6	
	12-3-63	12-26-63	4.0 + 0.7	19.4 + 2.6	
Analyses received iron The	1-7-64	1-13-64	3.6 ± 6.7	8.1 + 2.6	
of Southern California	3-3-64	3-14-64	3.2 + 0.7	9.5 + 5.91	
	14-2-614	14-1.8-64	2.0 + 0.7	23.7 + 2.6	
	5-5-61;	5-30-64	1.6 + 0.7	10.7 + 2.6	
	6-2-64	7-20-64	3.2 + 0.7	23.1 + 2.E	
	7-7-64	7-24-61	2.8 + 0.7	23.1 + 2.6	
	8-4-64	8-15-61;	5.2 + 0.7	24.5 + 2.6	
	9-1-64	9-20-64	5.3 + 0.7	19.6 + 2.6	

a. Deviations reported at the 90 percent confidence level.

TABLE D-3
RADIOASSAYS OF SURFACE WATER

SANTA ANA DRAINAGE PROVINCE (Y)

	Sta				Picocuries	per Liter®	
Station	°N	Date	Dissolved Alpha	ha	Solid Alpha	Dissolved Beta	Solid Beta
Water Year 1963 - 1964		1364					
Warm Creek at Colton	500	5-3	- 2.67 + 1.	246	2.68 + 2.17	6.45 + 12.98	5.24 + 10.39 - 2.00 + 8.26
Santa Ana River near Arlington	51	7-6	0.70 + 5. 9.11 + 22.	35	0.38 + 2.32	14.40 + 15.30 22.37 ± 12.56	9.33 + 10.99
Santa Ana River below Prado Dem	51a	4.0	2.91 + 4. 2.10 + 4.	18	1.14 + 1.57	13.42 + 13.02 17.13 ± 12.60	3.00 + 10.28
Santa Ana River near Mentone	51b	5-7	6.46 + 3.	828	0.18 + 1.11	15.30 + 12.50 6.13 \pm 10.87	8.79 + 8.64
Santa Ana River near Norco	51e	2-8	6.00 + 4.	84	1.91 + 1.52	23.98 + 11.39	0.92 + 9.61
Santa Ana River at Colton	51£	9-2	- 2.61 + 0. 4.93 + 4.	13	2.68 + 2.41	32.10 + 13.72 16.77 + 12.38	28.68 + 11.37 - 1.70 + 8.32
San Timoteo Creek near Loma Linda	518	79	0.50 + 2.	55	3.20 + 2.55	16.87 + 13.04 10.81 + 10.55	10.45 + 10.92
Chino Greek near Chino	88	4.8	- 3.93 + 1. 12.89 + 8.	45. LL	0.64 + 2.09	58.77 + 14.54 18.83 + 13.52	7.91 + 12.28
Lake Elsinore at North Shore	89	5-15	- 1.85 + 4. 5.79 ± 7.	74	0.18 + 1.11	2.94 + 13.00 6.36 + 13.59	10.64 + 8.86
Towns to the company of the Of monogen and the following	0. now	non + non	Prono lower				

a. Deviations reported at the 95 percent confidence level.

TABLE D-3
RADIOASSAYS OF SURFACE WATER

SAN DIEGO DRAINAGE PROVINCE (Z)

4-4-6	Sta.	-			Picocuries	per Liter®	
Station	No	Date	Dissolved Al	Aipha	Solid Alpha	Dissolved Beta	Solid Beta
Water Year 1963 - 1964		1364					
Santa Margarita River near Fallbrook	51c	5-15	2.86	0.93	- 0.05 + 0.80 - 0.57 + 0.48	- 8.55 + 8.70 - 0.79 <u>+</u> 13.12	13.52 + 9.07
San Luis Rey River near Pala	62	5-15	Dry				
Escondido Greek near Harmony Grove	63	5-14	3.48 +	7.18	0.73 + 1.35 0.59 + 1.03	9.65 + 15.84 20.89 + 14.70	- 3.54 + 9.17 2.54 ± 7.86
San Dieguito River near San Pasqual Valley	179	5-14	Dry				
San Diego River at Old Mission Dam	65	5-13	3.55 +	1.36	2.43 + 2.16	10.06 + 15.25	- 4.47 + 9.85 3.72 + 8.91
Spring Valley Creek near La Pressa	65b	5-14	58.79 + 10	107.92	- 0.03 + 0.77 0.99 + 1.04	- 42.98 + 76.62 - 47.97 + 79.76	0.48 + 8.39
San Diego River near Mission Gorge Road	65c	5-13	3.68 + 4.09 + 1	5.82	0.02 + 0.74	13.61 + 15.52	1.32 + 7.95
Tie Juana River at International Boundary	99	5-14	0.91 + Dry	7.00	5.44 + 5.17	80.89 + 35.76	13.81 + 47.88

a. Deviations reported at the 95 percent confidence level.

SPECTROGRAPHIC ANALYSES OF SURFACE WATER WOMEN COMMISSION 1 (1)

TABLE D-4 SPECTROGRAPHIC ANALYSES OF SURFACE WATER

MATER YEAR 1 A3+04

									Const	ituents	Constituents in parts per	per billion	u C						
Station	Sto	Date	Alumi.	Beryl.	Bismuth	Cadmium	Coball		Copper	Iron G	Gallium	-	-	-	Nickel	Lead	Titanium V	Vanadium	3012
		1954	120	e ap	(8)	در و)،	(5.0)	e, (; (; (; (; (; (; (; (; (; (; (; (; (;	((,))	(F0)	(69)	(o.e.)	1 Whi.	'No.)	(N)	(PD)	- L	()	1203
								0	CENTRAL COASTAL DEATHAGE	PAL DRA		PROVINCE (T)							
Santa Ynez River near Solvang	458	5- 4	1,4*	0.57**	0.23**	1.4**	1,4*	1,4**	1.4*	5.0	5.7** 0	0.29**	1.4**	4.6	1.7	1,4**	0.57**	2.2	5.7**
Santa Ynez River at Cachuma Reservoir	q+p	9-1	0.0	0.57**	0.29**	1.4**	1.4*	1.4**	L47	5.7	5.7** 0	**62.0	1.,,**	5.7	D. 63	1.4*	0.57**	C.	5.7**
								31	LOS ANGELES DRAINAGE PROVINCE (U)	3 DRAIN	GE PROV	INCE (U)							
Santa Clara River at L.AVentura County Line	- 	2 - 2	1,4*	0.57***	0.29**	1.4**	1.4**	1,4**	1.4*	4.9	5.7**	0.29**	1,4**	4.3	1.6	1.4*	0.57**	0.29*	5.7**
Janta Clara River near Santa Paula	4.78	5-5	1.4*	0.57**	0.71	1,4**	1.4**	1.4**	1.4**	4.7.	5.7** 0	0.23**	1.4**	19	2.0	1.4*	0.52**	0.69	5.7**
ios Angeles River at Figueroa Street	1,47	5- c 9-14	1.4*	0.57**	0.29**	1.4**	1.4*	1.4**	1.4**	3.1	5.7** 2	0.29** 2.7	1.4**	0.9	1.3	1.4**	0.57**	1.5	5.7**
Los Angeles River at Pacific Coast Highway	89	5- c 9-14	1.5*	0.57**	0.29**	1.4**	1,4**	1.4**	1.4**	100**	5.7** 7	7.4	237	3.7	4.9	1,4** 0	0.57**	6.9	5.7**
Ric Hondo at Whittier Narrows	67	5- c 9-14	1,4* Dry -	0.57** No Flow	0,29**	4.3	1.4**	6.4	1.4**	e	5.7**	0.29**	1.4**	12	4.5	1.4**	0.57**	9.4	5.7*
Rio Hondo above Spreading Grounds	964	5- 6 9-14	1.4*	0.57**	0.29**	7.7	1.4**	8.0 1.4**	9.7	7.4 9.4	5.7** 0	0.23**	1.4	8.,	8.0	5.3	0.57** 1	5.1	5.7*
San Gabriel River at Whittier Narrows	90	5- c 9.14	1.4* Dry -	0.57** No Flow	0.29**	1.4**	1,4**	1,4**	1.4**	5.	5.7**	**60.0	1.4**	14	7.7	1.4**	0.57**	5.1	5.7*
Ventura River near Ventura	3	5-5	1.4*	0.57**	3.29**	1.4**	3.4	1.4**	1.4**	9 c	5.7**	0.29**	1.4**	4.0	2.2	1.4**	0.57**	0.51	5.7**
								COLORA	COLORADO RIVER	BASIN D	RAINAGE	DRAINAGE PROVINCE (X)	 X						
Colorado River at Yuma, Arizona	33	5-12 9-8	1.4*	0.57**	*52.0	1,4**	1,4*	1,4**	1,4**	3.7	5.7**	0.29**	1.4**	5.1	03.0	1.4**	0.57**	3.7	5.7*
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SPECTROGRAPHIC ANALYSES OF SURFACE WATER

WEEN TRAIN 1963-64

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### 144 144	then \$1 \frac{5}{12} \fr	500 5-			 1.4**	1,4**	31	5.7**	0.29**	3.7	6.4	28	1,4**	0.57**	500	~ ~
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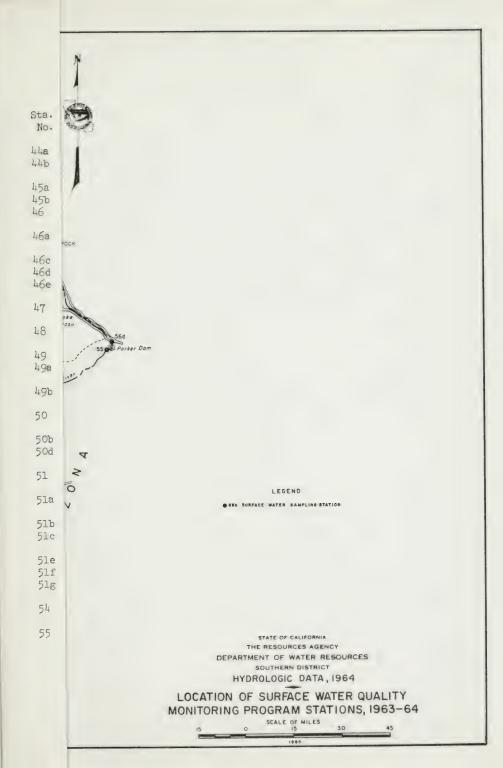
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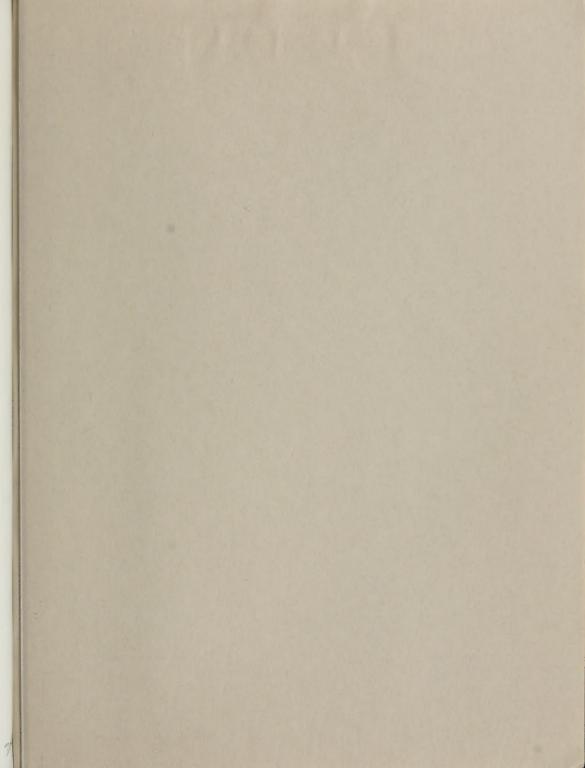
ta.		Sta.	
No.		No.	
-8	Cuyana River near Carcy	56	Colorado River at
46	Sants Ynez River at		Yuma, Arizona
	Cachuma Reservoir	5éa	All American Canal near
92	Santa Ynez River near Solvang		Pilot Knob
576	Matilija Creek above Dam	566	Colorado River below
6	Senta Clara River at Los		Morelos Dem
	Angeles-Ventura County Line	56c	Colorado River near Blythe
ŕa	Sente Clare River near Sente Paule	et q	Colorado River at Colorado River Aqueduct Intake
he	Piru Creek near Piru	57	New River at International
6 a	Sespe Creek near Fillmore		Boundary
r e	Santa Paula Creek near	5¢	New River near Westmorland
7	Sante Paula Los Angeles River at	59	Alano River at International Boundary
	Figueroa Street	60	Alamo River near Calipatria
ź	Los Angeles River at	€1	Ventura River near Ventura
	Pacific Coast Highway	62	San Luis Rey River near Pala
2	Rio Hondo at Whittier Narrows	63	Escondido Creek nesr
40.	Mission Creek at Whittier		Harmony Grove
	Nerrovs	64	San Dieguito River below
16	Rio Hondo above Spreading		San Pasqual Valley
	Grounds	65	San Diego River at
	Son Gobriel River at		Old Mission Dam
	Whittier Narrows	65%	Spring Valley Creek near
70	Warm Creek at Colton		La Pressa
203	San Gabriel River st	65e	San Diego River near
	Azusa Poverhouse		Mission Gorge Road
1	Santa Ana River near	66	Tia Juana River at
	Arlington		International Boundary
18	Santa Ana River below	€7 €7a	Mojave River near Victorville
	Predo Dan	45 45	Mojave River at the Forks
18	Santa Ana River near Mentone	00	Whitewater River near Whitewater
	Santa Margarita River near Fallbrook	68a	Salton Sea at State Park
. e	Santa Ans River nesr Morco	629	Whitevater River near Mecca
	Santa Ana River at Colton	63	Colorado River Aqueduct at
36	San Timoteo Creek near Long		La Verne
-6	Linds	70	Los Am eles Aqueduct near
	Colorado River near		San Permando
	Topock, Arizone	4	Chino Creek near Chino
	Colorado River below	80	Lake Elsinore at State Park
	Parker Dan		True browner of nonce talk











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